BUTANE-PROPANE News

HEADQUARTERS FOR
INFORMATION SIN

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the result of Scaife's greatly advanced production techniques

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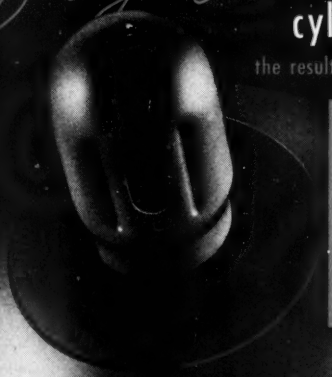
Dura-Lite
CYLINDERS



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Scaife Company

Oakmont (Pittsburgh District), Pa.

NOVEMBER, 1951 — 50c per Copy

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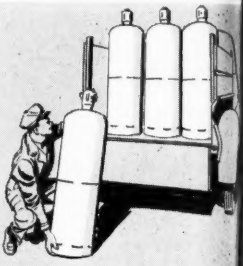

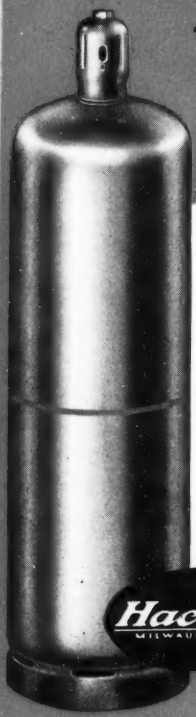

The man bent over his microscope, above, is important to you and to all LP-Gas operators. He is part of the large staff of laboratory engineers which tests the quality of Hackney Lightweight Cylinders.

Steel and weld specimens from the cylinders are brought to this technician who examines and photographs them. Constant checks of this sort by trained personnel keep the quality of Hackney materials and workmanship at the highest possible level . . . assure the best cylinders for you.

Rigid inspections like this are only part of the care that goes into making Hackney Products. Skilled designers and the most modern manufacturing techniques as well, have made Hackney Lightweight Cylinders the preference of LP-Gas dealers and operators by more than 2 to 1.

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CONTAINERS FOR GASES, LIQUIDS AND SOLIDS

NOVEMBER, 1951

BUTANE-PROPANE News
ABC CCA

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Letters

HEADQUARTERS FOR LP-GAS INFORMATION SINCE 1931

NORTH DAKOTA

Please advise if you consider it good practice to use ⅝ in. O.D. copper tubing for underground line, two-stage with 10 lbs. pressure in the line up to second stage regulation?

Length of run: 50 ft. Advise what capacities the ⅝-in. will handle.

J.W.T.

A 50-ft. straight run of ⅜-in. Type K copper tubing will carry enough LP-Gas to deliver about 300,000 Btu if the primary regulator pressure discharge is 10 lbs. and a 1-lb. drop is allowed in the run to the secondary regulator.

The 1951 edition of the Handbook Butane-Propane Gases has tables for both low pressure and high pressure line sizing.

Copper tubing is satisfactory for this service unless soil conditions are such that the copper tubing will be attacked and corroded. Cinder fill or soils in which sulfur compounds have infiltered are corrosive to copper. When such soils are encountered, the tubing should be covered with a protective coating.—Ed.

●

FRANCE

We should be interested to receive some information on fittings for the ripening of bananas with butane-propane gas, especially as far as the thermostat of such fittings is concerned.

F.D.

The American Gas Assn., 420 Lexington Ave., New York, in one of its Industrial Service Letters, gives much valuable information about banana ripening rooms. This letter, entitled "Safe Heating of Banana Ripening Rooms" by C. George Segeler, describes recommended equipment and practices.

It states that John M. Murcott, 190-48 111th Road, St. Albans, New York, is the agent in the United States who sells equipment designed for banana room heating service. We suggest you contact the American Gas Assn. and Mr. Murcott for further information.—Ed.

●

MISSOURI

We are writing you regarding an approved method of preparing vessels containing propane or butane for repair work. Occasionally it is necessary to repair these vessels after they have been in use and we are attempting to improve our present procedure of removing the propane residue.

At the present time it is our practice to use live steam for a period of 24 hours through several openings in the vessels with an outlet for any condensate which may be formed. At the end of that time an explosimeter is used to test the tank, and if not completely clear of explosive vapors, the steam is turned into the vessel for another period of 24 hours. This is repeated until the vessel is clean.

While the above procedure does eliminate the explosive vapors, this is frequently time-consuming and

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● **BUTANE-PROPANE NEWS welcomes letters from our readers, but it must be understood that this magazine does not necessarily concur in opinions expressed by them.—Editor.**

costly as, usually, one 24-hour period of steaming is not sufficient to completely purge the vessel. Generally, our repair jobs are very rushed and the time consumed in preparing the tank for work is urgently needed.

J.R.V.

We know several companies who repair, cut and weld both gasoline and LP-Gas storage tanks. We find in general that they do not resort to steaming except when they want to clean the tank prior to working on it.

There are two methods; one is to pipe the exhaust from a truck motor or automobile engine into the storage tank and allow it to run for some time until all the gas in the tank has been purged from it. It is then tested with an explosive meter to check for explosive mixture. When the meter indicates that it is safe for them to work on it, they proceed.

The second method is to use CO_2 in the same manner as described above with the truck motor. Here again, the atmosphere in the tank is tested before any work is done.

It is said that the above practices provide a safer method of operation for two reasons. One is that there is a positive flow through the tanks, whereas when steam is shut off, air enters the tank and some heavy ends can then evaporate and form an explosive mixture. Also, the tank is apt to breathe when worked on due to the heating and cooling of the shell. The flow of an inert gas prevents any oxygen from getting back into the tank. Secondly, since there is a positive flow of inert gas, there is no oxygen in the tank and even though some combustible gas is present there is nothing to support combustion.

Users of the first method claim the main caution is to have the engine properly adjusted so that it does not give off excess air containing oxygen in the exhaust gases.—Ed.

●

NEBRASKA

Somewhere I have seen figures on the cost of operating a propane gas truck. I have the impression the cost, on a national basis, is 22½ cents per mile. Do you have any data on this?

A.T.B.

Your estimate of 22½ cents per mile is not very far off. We have not seen any average national figures but we understand that the industry uses 25 cents per mile as a general basis.—Ed.

●

COLORADO

This office, which is the enforcing authority for the State of Colorado law and regulations on LP-Gas, has a question relating to vapor pressure.

In the sections of our regulations covering "Designed Working Pressure and Classification of Storage Containers" the minimum design working pressure for the various code containers is based upon the vapor pressures of the gases at 100° F. This calls for knowledge of the vapor pressures of the LP-Gases commonly used.

On the basis of standards followed and grades accepted by the LP-Gas industry as commercial propane, including the specifications of the Natural Gasoline Assn. of America, we consider commercial propane as having a vapor pressure definitely in excess of 175 psig at 100° F and accordingly, have condemned the use of ASME Code, paragraph U-201, containers of 200 lbs. design working pressure for the storage or transportation of commercial propane.

Your Handbook Butane - Propane

Correction

In the September issue of BUTANE-PROPANE *News* on p. 43 an answer to "J.W.M." of Texas stated that 148 gals. of propane were required to replace 1000 gals. of oil.

This was a typographical error. It should have read 1480 gals. instead of 148.—Ed.

Gases 3rd Edition, has ben cited in support of a contention by one dealer that the vapor pressure of propane is 172 psig at 100° F and this figure is given in your handbook at Table No. 1, page 13 and at Table No. 3 on page 26. It is also noted, however, in Part 2, Chapter 1, page 21, that "When inconsistencies are noted in comparing the material in this chapter with properties given for the commercially used propanes and butanes, it should be remembered that the commercial compounds are not as highly purified as those used by the chemists and physicists in making their determinations."

The qualification above quoted would appear to explain the inconsistency between the Handbook figure of 172 psig and our position that commercial propane definitely exceeds 175 psig at 100° F. We should be interested, nevertheless, in the viewpoint of the Handbook editors on this question.

Yours very truly,
John E. Cronin,
State Inspector of Oils

We agree that commercial propane often does have vapor pressures in excess of 175 psig at 100°F. This is because the commercial propanes often contain some ethane and, if produced by oil refinery processes, they may also contain quantities of propylene (propane) which increase the vapor pressure.

The effects of known quantities of these lighter hydrocarbons can be calculated as shown in Table 1 (Calculations of Vapor Pressure of LP-Gas Mixtures), p. 41 of the Handbook Butane-Propane Gases.—Ed.

●

TEXAS

Cotton farmers in this area are plagued with insects and worms which every year take their toll in cotton production. Chief culprit this year was a small green worm which hatches out from eggs laid by small millers or butterflies.

Butterflies are attracted at night by lights or open flares. They will fly into an open flame and destroy themselves. Each butterfly is estimated to produce 230 eggs from which the destructive worm is hatched.

We are interested in a butane light or flare—perhaps with a reflector—which would help keep cotton fields free from these pests. Can you give us any information on this subject?

If such an idea does work satisfactorily, possibilities are great as the present practice of poisoning hinders growth and maturity of the actual plant or stalk.

E.K.B.

We do not have any information on a burner which has been designed for this particular purpose. However, the American Liquid Gas Corp., 1109 South Santa Fe Ave., Los Angeles, has done considerable work in developing burners for orchard heating and possibly has a burner which could be developed for the work in which you are interested.—Ed.

●

HAWAII

Several of our LP-Gas customers are planning to install charcoal operated outdoor barbecue fireplaces. We have installed bar burners on a few such installations in the past, which have not been entirely satisfactory because of ash-clogging and rapid deterioration of the burner.

We would appreciate your sending us whatever available information you may have on present practices in charcoal ignition.

D.N.S.

Your trouble cannot be remedied by burner design alone as the application of the burner is of prime importance if it is to function successfully.

Small venturi type burners, commonly used as pilot burners for industrial burner systems may prove successful.—Ed.

Comment

FOR the first time, the U. S. Bureau of Mines has broken down its anual report on the marketed production of LP-Gas on a state-by-state basis.

Maybe this won't help a dealer sign any new contracts but it certainly will give him a better view of the industry as a whole and his position in it as a member of some state group. Some surprising figures show up for different states. The outstanding ones are those along the Atlantic Seaboard where the use of LPG has increased tremendously since the last government report. Tables and an extended story upon this subject will be found in this issue.

•

If any section of the country runs short of fuel this winter, as some did last year, it won't be because the top brass and the little dealers, as well, haven't tried to do something about it.

Dealers who got caught last winter because of the railroad strike, cold weather, and inadequate transportation facilities have been working hard on their customers who use fuel for winter heating to sell them larger storage. Much new dealer storage has also gone in, and at the points of production increased storage is now available. Storing LPG underground in salt domes promises to do more than any other one thing to provide a reserve supply of fuel for winter.

It takes time for a young industry like ours to work out its problems and it is rather remarkable that LP-Gas dealers have been as successful as they have when it is remembered that until lately there had been but limited unification of effort and organization within the industry. With thousands of dealers working haphazardly and, for most part, without instruction or engineering help, it must be said that they have done a pretty good job from the standpoint of providing an essential service in a highly successful manner and with an excellent safety record.

•

Domestic appliances provide a nearly constant year-round volume of fuel. Heating units consume most of their fuel in the winter when delivery costs are highest. Farm tractors use most of their fuel during the warm months.

It must be obvious that it will pay to try to offset the winter heating demand with more sales of tractor conversions in order to build a summer load. Most assuredly dealers should work the hardest on heating customers to sell them a summer application of the fuel and to fill their storage tanks early in the fall.

•

Those who are following C. C. Turner's valuable articles on "Practical Management of an LP-Gas Business" in the regular issues of BUTANE-PROPANE *News* will learn something this month about establishing a pound gas rate equivalent to electricity.

If you are not able to compare the Btu values of gas and electricity for given units of measurement and to establish your retail prices accordingly, you are at a disadvantage.

Mr. Turner tells you what to do and how to do it.

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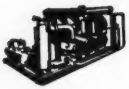
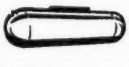


PACKAGED COMPRESSOR PLANTS

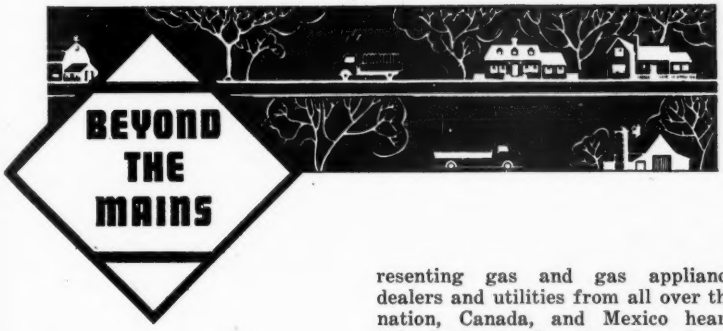
L.P.G. SYSTEMS

CAST STEEL FITTINGS



ANHYDROUS AMMONIA EQUIPMENT

PRESSURE BULK STORAGE



IT'S hard to believe, but Christmas is drawing near again.

The season offers special opportunities to sell gas appliances for presents that beautify the home while serving their indispensible purposes. Even in November it is feasible to start local campaigns to plant in the minds of prospective clients the thought that they can solve the gift problem by installing an LPG system and buying new kitchen appliances.

Last year the Protane Corp. of Erie, Pa., carried a newspaper ad which showed a sketch of a wife whispering her Santa Claus letter in her husband's ear. The copy read: "Drop a holiday hint to your husband. Start your own whispering campaign for a sparkling new gas range."

There are lots of approaches to this general subject and dealers may want to start thinking about them.

●

Human failure is the underlying cause of the majority of accidents that take heavy toll each year in all lines of endeavor. The refusal of individuals to exercise ordinary precaution is largely responsible for most of the accidents involving the worker and the public, according to the American Gas Assn.

Nearly 150 safety executives representing gas and gas appliance dealers and utilities from all over the nation, Canada, and Mexico heard this basic truth stressed and restressed at the second annual safety conference sponsored by the accident prevention committee of the AGA in Kansas City in September.

●

Safety hinges on three factors when using LPG, according to Ohio's state fire marshal, Harry J. Callan. These are (1) correctly specified design; (2) proper installation; (3) trained workers and operators.

He could have added eternal vigilance.

Actually, safety can be considered a state of mind. An individual has to want to be safe in order to not endanger the well-being of others when he is handling commodities that might cause accidents. If he is earnest and conscientious he will seek to avoid doing anything or leaving anything undone that could result hazardously. Dealers can help make their employes safety-conscious through constant personal instruction, employe training meetings, and developing in the minds of their workers sincere interest in their jobs.

●

K. S. Adams, chairman of the board of Phillips Petroleum Co., told Kansas City business leaders in October that "self-styled champions of the natural gas consumer are trying to

hoodwink the public into believing Federal control of producers and gatherers of natural gas would mean more gas at lower prices, when the fact is that it would mean less gas—higher prices."

Will the LP-Gas industry be the next target of an over-eager government to control the movements of its businessmen?

Alabama has recently been the scene of a bitter fight between the state and retail gas dealers with the legislature trying to force the dealers to come under the state utility laws. It ended up with a compromise of an LP-Gas commission, but dealers everywhere have to be alert to encroachments of government upon their rights and the effort of politicians to stir up trouble.

•

Recent activities in Washington have revolved around the vital problem of adequate steel for consumer tanks, according to Howard D. White, who is the Washington, D.C., representative of the LPGA and who has been working as closely as possible with Washington authorities.

In an Oct. 10 bulletin, Mr. White states that a new order limiting the production of consumer tanks has been drafted by NPA. This is reported to be designed to limit the production of consumers tanks to 50% of the first quarter of 1950. It will apply to LP-Gas tanks, as well as others, and will take effect the first quarter of 1952.

The order was to be submitted to the heavy metal tanks industry advisory committee late in October.

Of further interest to tank manufacturers is the provision that tank heads are to be designated "A" products in the first quarter of 1952. Propane storage tanks of 30,000-gal. capacity will also be in the same classification.

Advance CMP allotments for the first three quarters of 1952 to the tank manufacturers show a cut of approximately 10% per quarter which, if sustained, would forecast an allocation of about 21% of requirements in the third quarter.

It is reported that military requirements for propane cylinders are scheduled to take a large quantity of these vessels in 1952. Production capacity is sufficient for both uses if materials are available.

Copper continues short and butane is expected to be hard to get for domestic use.

Up to Aug. 1, 822 new pressure tank cars had been delivered for the year and production was expected to be speeded up during the remaining months of 1951.

The Petroleum Administration for Defense has named a 12-man survey group to give it a continuing picture of supply and requirements of gas and the gas industry.

•

Having the tractor available for service at the right time for plowing, planting, and harvesting may make the difference between profit and loss on a farmer's operation for the entire year.

Engines operating on LPG are more dependable because they undergo less wear and are less likely to need unexpected repairs during the height of the busy season.

Fleet operators report that LP-Gas-burning engines require less maintenance work than gasoline or diesel engines. Such vehicles generally have earning powers of several dollars per hour so a unit broken down for two or three days may become very costly to the owner. This is equally true of tractors.

If LP-Gas will defer overhauling jobs and lessen engine trouble, it becomes sound insurance for successful operation of either trucks or tractors.

First State-By-State Breakdown Gives New Picture Of Industry

THE 1950 report of the U. S. Bureau of Mines* covering consumption of LP-Gas has been made considerably more useful than in the past due to breaking down the figures on a state basis. (See Table 1.) Heretofore they were prepared on a regional division only.

Total Volume Up 22.8%

As noted in the brief summary last month, consumption reached an all-time high with a gain of 22.8% over 1949, and a marketed production of 3,482,567,000 gallons. The distribution by states is shown in Fig. 1. Domestic and commercial usage led all other applications, with a total volume of 2,034,464,000 gallons—58.4% of the total consumption, and a gain of 25% over 1949. Steady gains were also shown in the other major uses, with increases reported as follows: Internal combustion engines, 66.5%; industrial, 33.8%; synthetic rubber, 28.5%; chemical, 12.4%; utility gas, 5.2%.

Gains in domestic consumption were greatest along the Atlantic seaboard, where an increase averaging almost 57% was shown (Fig. 2). The Pacific Coast states showed a loss of nearly 6%, due to the great expansion during the year of the utility gas systems supplied by the new natural gas line from Texas. The North Central and the Rocky Mountain states showed average gains of about one third, while the Gulf Coast states showed only about 10% gain. This is believed to be because the earlier development of the business in those states has carried it closer to the saturation point.

Increased use in internal combustion engines as shown in Fig. 3, reflects the industry's efforts to balance the summer load by promoting tractor conversions. Percentagewise, the Rocky Mountain states are far out in front with an increase of 2100%. Since the total consumption in those states was small, it does not have a corresponding effect on the national picture. The greatest gain in engine gallonage was made in District 3, where it went up from 15,372,000 to 43,742,000 gallons for an increase of 184.6%. The increase on the Pacific Coast was 92.6%.

It is significant to note that the power gallonage for California exceeds that of the entire corn belt. This is believed to be because of

*See BUTANE-PROPANE *News*, Oct. 1951, Page 68.

TABLE 1. SALES OF LIQUEFIED PETROLEUM GAS — 1950 BY STATE & PRINCIPAL USES — THOUSANDS OF GALLONS

	Domestic & Commercial	Gas Mfg.	Industrial Plants	Syn. Rubber & Chemical	Internal Combust.	Other	TOTAL
Maine	12,516	734	182		55		13,487
New Hampshire	9,177	382	179				9,738
Vermont	5,115	1,156	110				6,381
Massachusetts	21,967	14,616	1,614			1	38,198
Rhode Island	4,918		320				5,238
Connecticut	20,031	7,186	13,684		590		41,491
New England	**73,724**	**24,074**	**16,089**		**645**	**1**	**114,533**
New York	61,306	7,914	3,277	1,517		10	74,024
Pennsylvania	38,471	10,403	19,740	11,050	21	10	79,695
New Jersey	35,017	12,880	23,446	2,787			74,130
Middle Atlantic	**134,794**	**31,197**	**46,463**	**15,354**	**21**	**20**	**227,849**
West Virginia	18,706	582	8,188	138,496	530		166,502
Maryland)							
Washington D. C.)	21,640	3,684	1,705				27,029
Delaware	6,770	783	315				7,868
Virginia	25,450	6,448	2,095	282	19		34,294
North Carolina	36,031	12,455	1,579		243	12	50,320
South Carolina	26,712	3,133	3,142		13		33,000
Georgia	43,835	6,569	2,254	4	520	20	53,202
Florida	54,241	4,515	436		347	22	59,561
South Atlantic	**233,385**	**38,169**	**19,714**	**138,782**	**1,672**	**54**	**431,776**
Ohio	28,457	5,478	3,696		1,136		38,767
Indiana	43,727	17,701	5,435	7,978	1,477		76,318
Illinois	94,815	17,368	15,810	137	10,069	1,691	139,890
Michigan	42,781	27,294	22,018	1,416	1,075		94,584
Wisconsin	40,125	10,916	32,550		1,700	4	85,295
East North Central	**249,905**	**78,757**	**79,509**	**9,531**	**15,457**	**1,695**	**434,854**
Minnesota	53,433	7,060	3,874		3,326		67,693
Iowa	44,677	10,092	5,701		471		60,941
Missouri	62,468	2,740	2,510		878	4,100	72,696
North Dakota	17,808	1,485	156		1,764	1	21,214
South Dakota	30,576	2,421	1,294		1,710	6	36,007
Nebraska	38,995	1,844	1,215		1,180		43,234
Kansas	69,186	454	293		5,267		75,200
West No. Central	**317,143**	**26,096**	**15,043**		**14,596**	**4,107**	**376,985**

TABLE 1 — Continued

	Domestic & Commercial	Gas Mfg.	Industrial Plants	Syn. Rubber & Chemical	Internal Combust.	Other	TOTAL
Kentucky	26,028	1,633	1,861	50,997	1,443		81,962
Tennessee	24,229	4,682	753	196	912		30,772
Alabama	31,256	2,962	2,111		455		36,784
Mississippi	51,277	24	462		3,281	100	55,144
East So. Central	**132,790**	**9,301**	**5,187**	**51,193**	**6,091**	**100**	**204,662**
Arkansas	71,584	302	1,031		1,973	1,453	76,343
Louisiana	128,781	320	4,334	94,392	5,775	1	233,603
Oklahoma	98,313	1,913	2,485	336	5,169		108,216
Texas	301,726	3,432	16,460	496,488	26,177	538	844,821
West So. Central	**600,404**	**5,967**	**24,310**	**591,216**	**39,094**	**1,992**	**1,262,983**
Montana	8,179	84	400		219		8,882
Idaho	3,526	4,433	60		24		8,043
Wyoming	18,741				1,508		20,249
Colorado	31,887	1,121	599		996	200	34,803
New Mexico	42,040	4,869	632		6,081	180	53,802
Arizona	19,066	785	18		2,022		21,891
Utah	2,162	278	217		26		2,683
Nevada	2,144	4,085	9				6,238
Mountain	**127,745**	**15,655**	**1,935**		**10,876**	**380**	**156,591**
Washington	8,832	5,715	1,543		139		16,229
Oregon	16,437	9,001	2,067		12		27,517
California	139,305	7,762	5,218	34,877	41,215	211	228,588
Pacific	**164,574**	**22,478**	**8,828**	**34,877**	**41,366**	**211**	**272,334**
Total U. S.	**2,034,464**	**251,694**	**217,078**	**840,953**	**129,818**	**8,560**	**3,482,567**
				Exports			**67,763**
				Grand Total			**3,550,330**

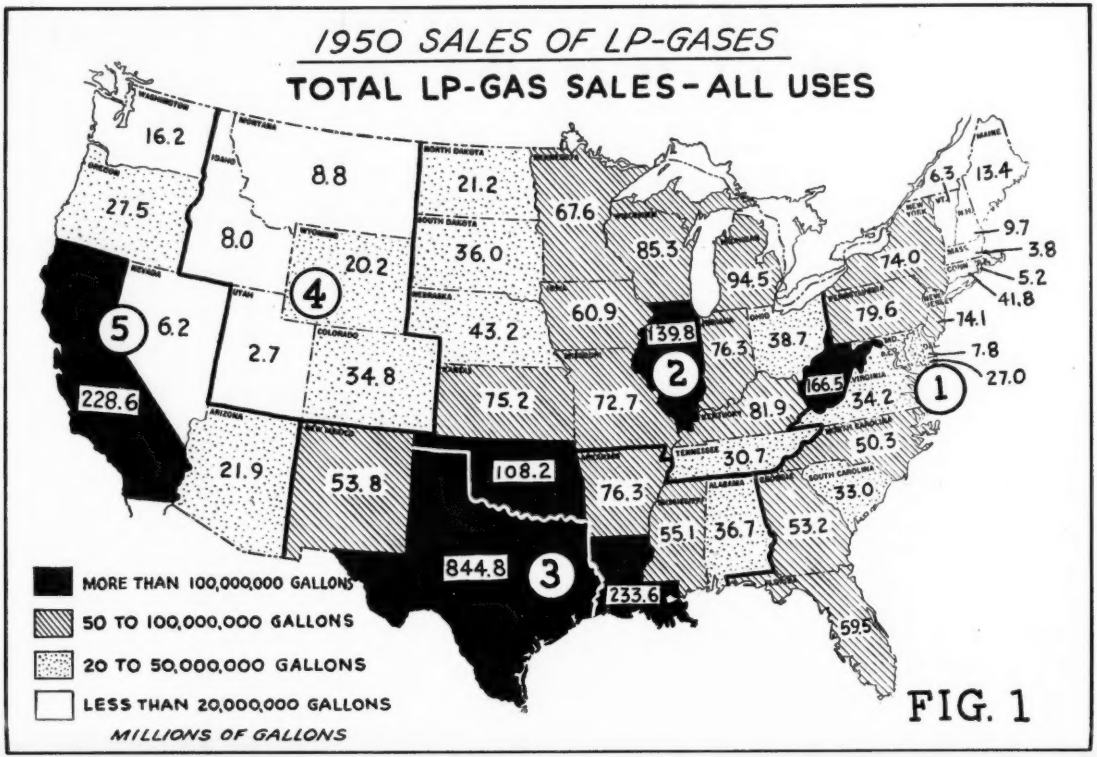

1950 SALES OF LP-GASES
TOTAL LP-GAS SALES - ALL USES
16.2
27.5
8.8
8.0
20.2
21.2
36.0
43.2
67.6
85.3
94.5
60.9
139.8
76.3
38.7
79.6
74.0
6.3
13.4
9.7
3.8
5.2
41.8
14.1
7.8
27.0
166.5
34.2
81.9
50.3
30.7
33.0
53.2
59.5
6.2
2.7
34.8
228.6
75.2
72.7
21.9
53.8
108.2
76.3
55.1
36.7
844.8
233.6
MORE THAN 100,000,000 GALLONS
50 TO 100,000,000 GALLONS
20 TO 50,000,000 GALLONS
LESS THAN 20,000,000 GALLONS
MILLIONS OF GALLONS

FIG. 1

extensive use in heavy duty trucks, a year-round demand stimulated by a substantial drop in butane-propane prices. Generally speaking, engine conversions are most numerous where the differential in fuel costs is greatest. That other factors also enter into the picture is shown by considering the geographical relation of the ten states having the greatest volume of engine fuel consumption to sources of supply:

1. California	41,215,000	gals.
2. Texas	26,177,000	"
3. Illinois	10,069,000	"
4. New Mexico	6,081,000	"
5. Louisiana	5,775,000	"
6. Kansas	5,267,000	"
7. Oklahoma	5,169,000	"
8. Minnesota	3,326,000	"
9. Mississippi	3,281,000	"
10. Arizona	2,022,000	"

The greatest increase in industrial plant use was also in District 3, with a gain of 154.5%. This was in spite of widespread availability of natural gas. The Atlantic Coast states show the next greatest gain, 65.5%. The greatest volume used industrially, however, was in the North Central states, where total industrial consumption was 99,651,000 gallons.

Butane Diverted to Rubber Needs

Use of butane-propane in the chemical, synthetic rubber, and utility gas industries is of interest to distributors only as it affects the nature and availability of the products which they may obtain for resale. Synthetic rubber production takes a tremendous amount of butane—228,485,000 gallons in 1950. (Since the Bureau of Mines report was written, all of the government-owned synthetic rubber plants which were idle have been put back in production, increasing the butane requirements for this purpose by approximately 50%.)

Other chemical industries divide their requirements about equally

Increased engine fuel use, particularly for farm tractors, has been of dominant interest in 1951-1952.

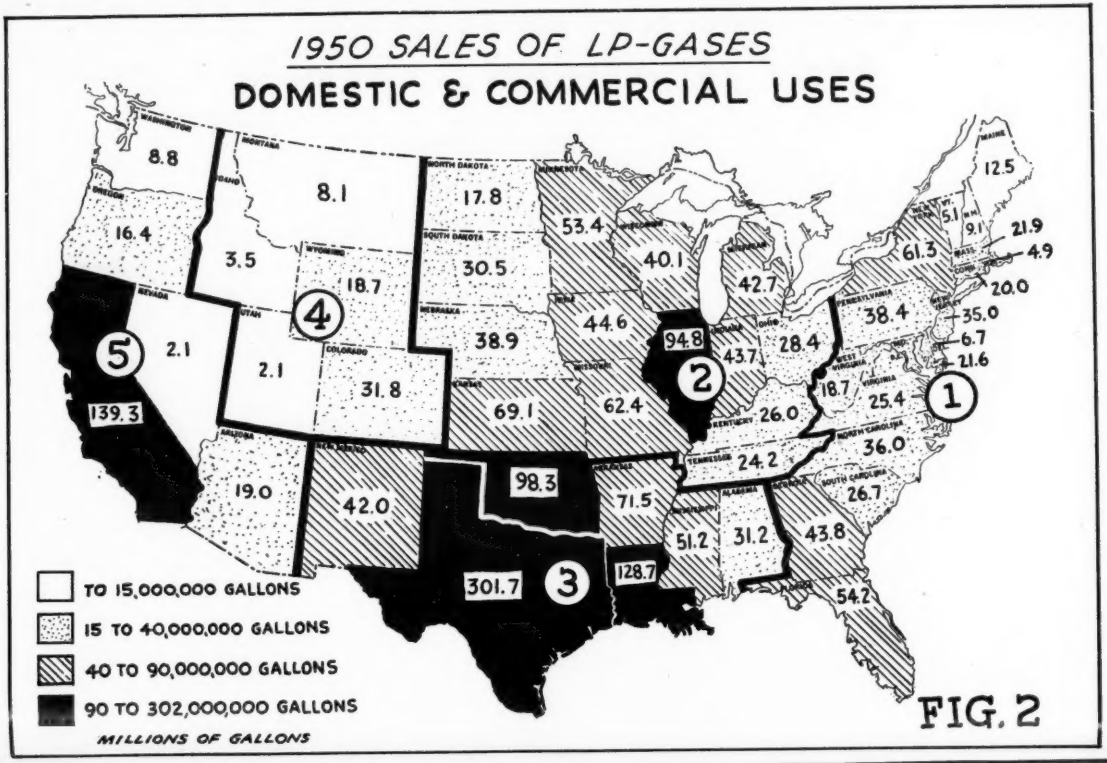

1950 SALES OF LP-GASES
DOMESTIC & COMMERCIAL USES
8.8
16.4
8.1
3.5
18.7
17.8
30.5
38.9
31.8
2.1
2.1
139.3
19.0
42.0
69.1
53.4
40.1
44.6
62.4
98.3
71.5
301.7
128.7
94.8
43.7
42.7
28.4
26.0
24.2
51.2
31.2
18.7
25.4
36.0
26.7
43.8
54.2
12.5
5.1
9.1
21.9
4.9
61.3
20.0
38.4
35.0
6.7
21.6
1
2
3
4
5
TO 15,000,000 GALLONS
15 TO 40,000,000 GALLONS
40 TO 90,000,000 GALLONS
90 TO 302,000,000 GALLONS
MILLIONS OF GALLONS

FIG. 2

MILLIONS OF GALLONS

FIG. 2

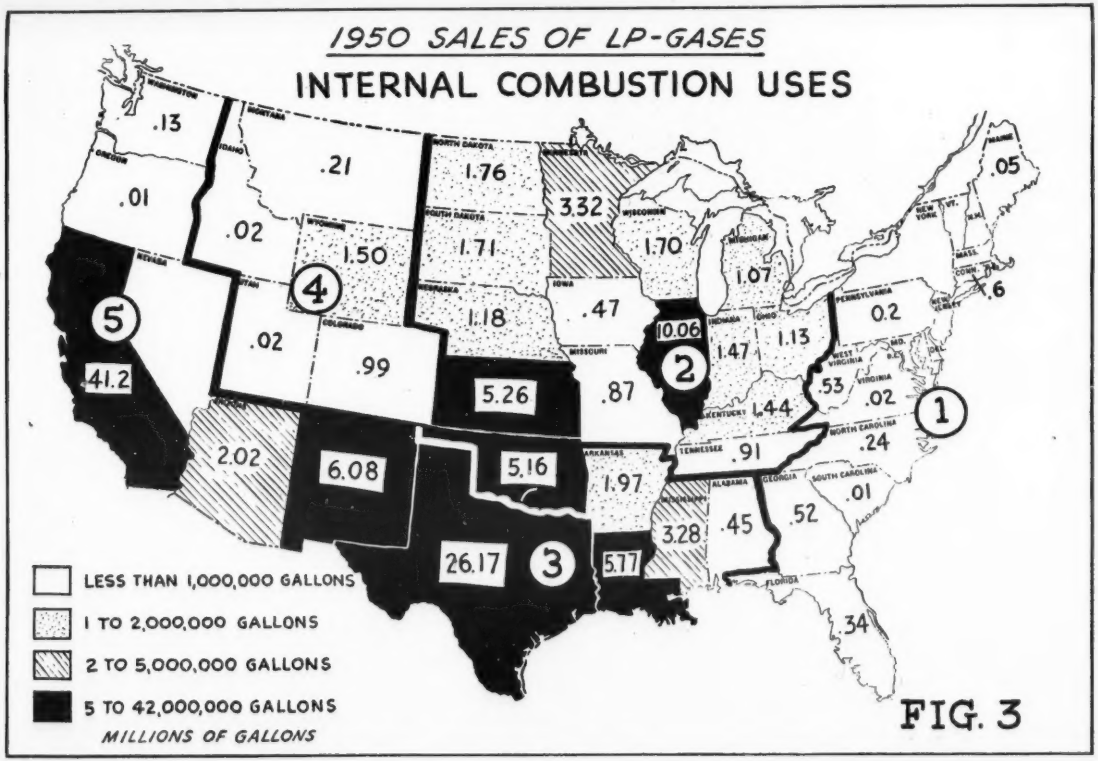


FIG. 3

TABLE 2

	Total	Rural Farm	Rural Non-Farm	Urban
COOKING	3,254,000	926,000	1,359,000	969,000
% of total	7.8%	16.0%	16.2%	3.5%
CENTRAL HEATING	195,000	44,000	72,000	79,000
% of total	.9%	4.5%	2.7%	.5%
NON-CENTRAL HEATING	676,000	250,000	340,000	87,000
% of total	3.4%	5.3%	6.2%	.9%

between propane and butane-propane mixtures, for a total of 612,-468,000 gallons.

Liquefied gases purchased by utilities for enriching manufactured gas and for direct distribution through mains showed only a slight gain during the year, reaching a total of 251,964,000 gallons. This is principally propane. The use of butane for this purpose has been declining rapidly for several years.

In connection with the above figures, which represent the present "performance" of the industry from a sales standpoint, it will be interesting to consider certain figures recently released which may be considered to indicate the "potential" for further gains by the industry.

The preliminary report of the 1950 Census of Housing (Table 2) indicates the figures covering occupied dwelling units using LP-Gas for cooking and heating, classified by location of residence. The percentages given show the portion of homes comprising that particular group in which LPG is now used.

The prime market for LP-Gas sales is in the farm and rural non-farm homes. According to the above survey, there are several times as many of these homes yet to be supplied as now enjoy the advantages of butane-propane cooking and heating.

While no figures on water heaters were available in the above survey, figures supplied by the Gas Appliance Manufacturers Assn. indicate that the ratio of water heater installations to domestic gas range sales is improving steadily. They quote the following figures for the past two years covering sales of LP-Gas units:

	1949	1950
Domestic Ranges	499,000	635,000
Automatic Domestic Water Heaters	183,000	310,000

A comparison of the Bureau of Mines figures on internal combustion engine fuel with the tractor surveys published in the June BUTANE-PROPANE *News* indicates that there is still a great potential for gain in this field. In no state do the figures show that as many as 10% of the available tractors have been converted.

Sell the Salesman TO Sell the Customer

By K. H. DICKSON
Vice President and General Manager, Uregas Service, Inc., Moberly, Mo.

A common error of distributors and factory representatives is to talk only to the store owner or manager. In following such a course, many fine sales features are never passed on to the salesmen and even though the merchandise is put on the dealer's floor it may not turn over as rapidly as it should for the buyer's time may be occupied in other problems in regular store operations, and the sales personnel has not been informed of the sales features.

KEN DICKSON

It has been the belief of the Uregas companies that everyone in every store should know as many sales features as possible about the items that Uregas distributes. Many sales are created by the service and installation man; many leads can be obtained from bookkeepers and other personnel not generally connected with sales. The main thing is to have the entire store personnel selling your lines, not those of someone else.

In making plans for the 1951 sales program, Uregas thought along the same lines as most companies, believing that their main job in the first six months of 1951 was to obtain merchandise. In past years Uregas has always conducted a series of cooking schools. In 1949 there were a series of 37 schools, and in 1950 72 schools. This year there were none planned. However, in March it became apparent there was going to be plenty of merchandise; at least for the immediate future, and there was an indication that dealers were going to have to WORK for sales.

We attempted to make arrangements for a home economist to conduct a series of cooking schools, but on such short notice, we could not obtain the services of a qualified person. However, in our search we did make contact with Decatur D. White, nationally recognized authority on gas cookery, and we contracted for his services for a period of six weeks, starting in September. This, of course, could not solve our immediate problem.

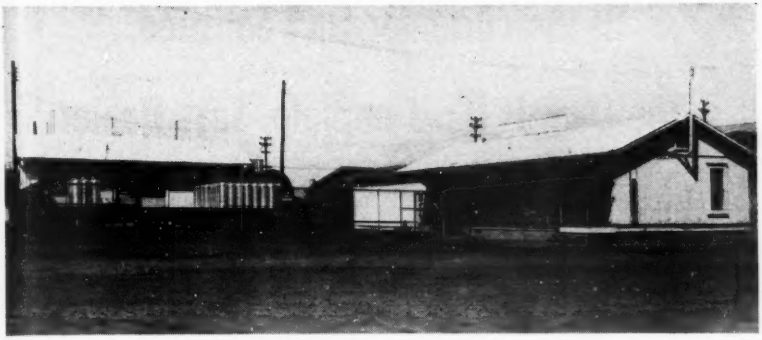
We discussed our problem with our manufacturers. The Hardwick Stove Co. indicated they were going to release a new deluxe line of ranges. The Tappan Stove Co. expressed the desire to cooperate, but we had to introduce the merchandise. The new line of Hardwicks had many fine sales features. Pin-point ignition for top

burners; the Harper-Wyman system of top burners was incorporated in the new line and a new low input pilot was incorporated in the "Economatic" model. The "Economatic" has a very fine sales feature and service men will be greatly interested in the fact that when Mrs. Jones calls in on Saturday evening and advises that the oven will not light, that the oven can be changed over from automatic ignition to manual ignition by a single twist of the wrist, saving that 15 mile service call that night.

It was the desire to bring as many of these features to the public's attention as possible. Due to the fact that we did not have the services of a home economist, it was felt that a series of store demonstrations would be the most practical method of reaching both the store personnel and the public. We, therefore, made arrangements for a complete store demonstration and advertising mats were provided announcing the new models. Both Hardwick and Tappan gas ranges were installed on dealer's floors so that live demonstrations could be made. Cookies were baked; coffee was served, and "Uregas" territory representatives spent the entire day in the dealer's store pointing out the sales features of both types of ranges.

Arrangements were made with Hawaiian Flower Growers, Inc., and orchids were provided the dealers at a cost of approximately 18 cents each and dealers ordered from 100 to 300 orchids. Homemakers were invited to the store for the demonstration and after witnessing it were presented with an orchid, and were advised that anyone purchasing a full-size gas range the week of the demonstration would receive at no additional charge a $46.50 food fixer.

Needless to say, a territory representative spending a full day in the dealer's store talking to several hundred women, had to have help. The store owner, manager, sales personnel, bookkeepers and service-installation men all had to talk about Hardwick, Tappan, and Uregas. In most cases the territory representative spent an additional one to three days in following up sales prospects. The results of some store demonstrations have meant 15 to 20 gas range sales; others, one or two, but the most gratifying part of this work is the fact that even in stores where there have not been too many sales during the week of the



Office building and filling plant of Uregas Service, Inc., at Moberly, Mo.

demonstration, sales have increased in the following weeks.

Yes, it is work, but it takes work to make sales, and Uregas territory representatives, eight in number, are conducting from 12 to 16 of these demonstrations every week in a territory of 79 counties in Missouri and Illinois.

In 1949, we sold 4000 gas ranges.

In 1950, we sold over 6000 gas ranges.

Business increased 47% in the first five months in 1951!

It certainly seems that informing our personnel regarding the appliances we sell is paying dividends for when our employes are well informed they are in the best position to sell the public, either through demonstration or by direct contact.

4-Week Courses To Be Offered By North Carolina State

Realizing the need for trained personnel in the gas industry, North Carolina State College, Raleigh, will inaugurate Jan. 1, 1952, a series of eight 4-week courses to be held during each calendar year.

Establishment of the school followed the request of gas industry leaders, both LP-Gas and natural (which will be introduced into the state shortly), according to J. H. Lampe, dean of the college's school of engineering, and Edward W. Ruggles, head of the extension division. Prof Frank Seely of the chemical engineering department will be director of the course and a member of the advisory committee.

Other members of the committee include M. L. Bailey, president of the North Carolina LP-Gas Assn. and of the General Automatic Gas Co., Granite Quarry; W. S. Lander, president, Rulane Gas Co., Charlotte; J. D. Barnes, president, Piedmont Gas Co.; C. A. Childress, Sungas Service, Raleigh; Lee E. Hurst, president, Piedmont Natural Gas Co., Charlotte; B. F. Zeigler, vice president, Public Service Co. of North Carolina, Gastonia; E. W. Ruggles and E. M. Schoenborn, both of North Carolina State.

If the Customer Isn't Satisfied, The Deal Is Not Complete, Says Dealer

By ERNEST W. FAIR

THERE'S nothing sells either gas or appliances better than a positive guarantee of satisfaction about which the purchaser can never have a doubt. This means satisfaction not only in the quality of the materials in the equipment or appliance being sold but satisfaction in their actual use.

That's how two young men who established a butane and appliance business at Claremore, Okla., in January of 1950 have built it into a successful enterprise. Last year they paid 1.5% of all the sales tax paid in from their county to the state and that includes collections by department and variety stores. It's a good measure of success.

They are Victor Fry, 24, and his brother, William, 26, who operate Fry's Butane and Appliance Co. in Claremore. The firm handles butane, propane, fuel tanks, stoves, refrigerators, water heaters and other appliances. They operate two tank trucks (a 1400-gal. and a 1392-gal.) and have an attractive retail store in the downtown district.

A number of good selling ideas have contributed to the success of this young firm but its theory of customer satisfaction has built them more business than any other. As explained above this guarantee of satisfaction goes beyond the equipment, itself.

"We've made it a point to do a lot of studying on heating problems, for example," Victor explains, "because when we make a recommendation to a customer we also guarantee satisfaction with the job an appliance will do; not just that it is a good appliance.

Mrs. Maggie Fry, mother of the Fry brothers, who operate in Claremore, Okla., keeps a busy office running smoothly.

"We feel a dealer's service should extend to making certain the customer is getting the right equipment or appliance for his or her particular home and need. Being able to intelligently tell a customer exactly what he will need and why is just as important as selling the actual equipment itself.

"We feel we've gotten along all right and that the biggest reason has

been that so many of our customers have come to us on recommendation of their friends."

Another big selling point used has been in carefully explaining how the fuel can be used safely.

"We point out the hazards that exist (as they do in the use of all fuels) and show customers how to use the fuel intelligently. We have made a number of sales others gave up by attention to this factor. We make up all fittings out in the open on pipes where, if leaks should occur, they could be corrected easily. We never have a connection or fitting inside a wall and wherever at all possible see that they are all made outside of the building. This, of course, can't be done 100% but a dealer can come pretty close."

In appliance selling they found it does not pay to attempt to get by without recognized brands. Victor points out that if a brand of appliance does not have and has not had advertising support in one's area, the task of selling it is so much greater that the dealer starts out "behind the eight ball."

Believers in Complete Line

They also believe the dealer should carry a complete line of appliances or none at all. They lost sales in their early days on single appliances because they did not have a complete line and the customer wanted to make an entire group purchase at one place. This is particularly important, they believe, where a dealer is working hard at selling initial installations and has the opportunity to sell everything the home owner will need.

It's also important to have a price tag on everything on the floor, they have found, for prospects dislike having to ask prices on merchandise and always suspect a verbally quoted price as fluctuating from one person to another. Free installations are part and parcel of their appliance selling and they always make it a point to stay around long enough to help the person in the initial use of an appliance purchased from their store.

Home-made trailer with conventional hoist for handling consumer tanks can be hooked on the truck or passenger car.

There's another important little thing on such occasions, Victor believes, and that is if there is anything nice about the customer's home the dealer or salesman should be sure to mention it.

They have 2500 names on their prospect list. Postcards with special messages are sent to the list every second month. The cards are chiefly informative, tell what new merchandise and appliances are available, give prices. Such cards are always of interest to farmers who, it has been learned, will keep them when they offer specific information and prices, even though they will throw away generalized advertising.

Spot announcements over local radio stations have pulled good busi-

ness for Fry's. They put them on every other hour, six days a week, tying in with manufacturers whose appliances they handle. Results are much better through such frequent scheduling than at scattered periods.

Trade-ins taken on appliances and systems are never rebuilt or repaired as Fry's have found it seldom worth the cost and time. Instead they are either disposed of immediately "as is" or taken to some local public sale and sold at auction. "A dealer can't come out on rebuilding," Victor declares.

Going After Conversions

Fry's have 25 truck engine conversion installations out and are beginning to make plans for pushing this branch of the business. Their first step will be construction of a butane filling station for trucks and cars on the highway at Claremore. They have found the best way to sell truck conversions is to take along the records they keep on their own truck operations. Showing prospects the firm's own books is much more impressive than a testimonial or prepared statement.

A small trailer hoist Fry's constructed has been of great value to them in handling tanks. It cost $200. A conventional swing-around hoist has been mounted on the flat two-wheel trailer. The tank can be picked up from any spot and dropped elsewhere with ease. Being small, the unit can be maneuvered easily into any area. It also permits carrying one tank on the regular truck and a second on this trailer unit. Another advantage is that in cases where the two trucks are busy it can be hooked onto a passenger car for delivery.

They've also worked out a money saver in repainting their trucks. The costliest part of repainting a truck, Victor explains, is in having signs thereon re-lettered and painted. They do away with this by putting Scotch tape over the lettering, painting the tank and then removing the tape. Lettering jobs generally outlast truck painting three to four times, Victor says.

Fry's have also found it to distinct advantage to make complete the card file system they keep on customer installations. For example, in addition to conventional information on name, address, size, type of installation, etc., they also list dates of last fuel purchase, the quantity, what units and appliances are being used and, most important to them, the amount of fuel in the tank at the last filling.

"Having these facts, and knowing your customer, can give you a mighty accurate picture of the exact condition of the user's needs at almost any time," Victor explains.

Company Begins Operations In Wausau, Wis.

The Wisconsin LP-Gas Co. recently began operations from its 32,000-gal. storage plant and offices in Wausau, Wis., according to Erwin C. Brandt, president of the new firm.

Other officers of the company are W. R. Christopherson, vice president, Charles Russell, secretary, and Ray McNamar, treasurer and manager.

All officers have had long experience in the LPG industry. Mr. Brandt, of Cedar Falls, Iowa, is vice president of the Wisconsin Bottled Gas Co., Medford, Wis. and is the Midwest representative of Vulcan-Hart Manufacturing Co. and the Ohio Foundry & Manufacturing Co.

Mr. Christopherson is president of the Spencer Bottle Gas Co., Spencer, Iowa; Mr. Russell is president of the Rapid Thermogas Co., Des Moines; and Mr. McNamar has been associated with the Wisconsin Bottled Gas Co.

Six Problems in Space Heating

By ALFRED R. JOHNSON
Dorchester, Mass.

THE rapid growth, created by public demand, for any kind of gas that can be used successfully and competitively as other heating fuels, is the basis of this discussion of the problems of gas space heating.

It will be limited to the use of equipment designed for propane or butane gases and the related problems created after installation. These problems usually center around six factors that must be considered when making a gas heating installation. These are:

1. Types of space heating equipment available best suited for successful heating with propane or butane gases.

2. Types and capacities of gas storage systems that can be used successfully for heating purposes the year round.

3. Types and construction of buildings that can be heated successfully the year round.

4. A simple method for estimating heat losses in structures built to meet the standards we have set for gas heating.

5. Installation and venting of equipment. Adherance to all safety rules established by local and national authorities.

6. Gas demand and cost of operation of gas heating appliances.

Step 1. Types of Gas Space Heaters

The types of space heaters that are commonly used in propane or butane gas heating are the floor furnace; built-in wall heater; cabinet type heater--both radiant and non-radiant; gas steam radiators; suspended type forced air units; kitchen range heaters; fireplace gas logs, and a limited use of central type heating, with its close relative, radiant heating in floors or ceilings.

I consider the use of these last two methods of heating in the luxury class as yet. The rest of this wide variety of equipment permits a wide selection of buildings that can be heated successfully with LP-Gas in competition with other fuels. The installation of these units requires the use of one or more in the space to be heated, and because of this, is often referred to as zone type heating. The need to use more than one heater is based on the fact that a free circulation of air unhampered by blank walls or dead end rooms is required in order to get the best heating results from the equipment.

In my opinion, all such heating equipment should be thermostatically controlled. When manually operated, gas is wasted, with the resulting complaint of high gas bills. The gas fired units listed as

ALFRED JOHNSON

Heating engineers are not made from listening to one lecture on space heating problems, said Alfred R. Johnson in a talk to the registrants at the recent LPG service school held at the University of Bridgeport in Bridgeport, Conn. But the experiences of field men in meeting problems most frequently arising in the installation and servicing of equipment can be made valuable additions to data books.

Mr. Johnson has found that sometimes the generally accepted theories are not practical so dealers are urged to imbibe all the information they can and then use good judgment.

Accurately estimating heat losses is always a vital need, and methods are described in the accompanying paper.

While this paper was slanted to problems occurring in Northeastern states, it will be of general interest.—Editor

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being most satisfactory to our type of operation, do not exceed a gas heat input of 85,000 Btu's per hour. This seems to be the maximum limit in Btu's of gas heat equipment that we can operate successfully and efficiently with the present field storage equipment now commonly used in the Northeastern area of this country.

Step 2. Types and Capacities of Gas Storage Systems

We are able to heat with the gas fired equipment just mentioned, using 100-lb. cylinders or storage tanks of from 100 to 500 gallons capacity during the coldest season of the year. All gas men need to understand the vaporization of propane and butane, under all climatic conditions. It is more complicated than many who now handle LP-Gas realize. The efficient operation of all kinds of gas fired units, as well as heating units depends on an adequate supply of gas at the proper pressure. The size pipe or tubing, and the length of allowable runs required to serve all equipment on the job is of utmost importance.

A lack of experience in understanding vaporizing efficiency means inefficiency in the operation of the gas equipment, excess gas cost to the consumer, and above all, when and how to add or remove 100-lb. cylinders from the job. Too many 100-lb. cylinders on the job means money wasted from an investment angle. Keep in your working tool kit a service gas manual, which will give the information on how to provide storage and install the equipment correctly.

Step 3. Types and Construction Standards of Buildings

We are able to heat during the coldest season of the year homes

of four and five rooms; small stores; meeting halls and churches, or any building similar in design and size, no matter for what purpose it may be used with the equipment listed. The largest user of gas heating equipment is the home. The standard of construction and insulation that applies to this type of building is to be applied to any other structure that has just been mentioned. The minimum standards for such buildings should be:

(1) Tight sills and foundations.
(2) Lath and plaster inside or its equivalent.
(3) Insulated overhead.
(4) Storm sash on all windows, especially those on the north side of the building.
(5) Drapes over picture windows which should be drawn after the sun goes down.

The ceilings should be flat in design. The open pitched roof, common to churches and summer camps, should be avoided. The heat will rise into the peak or ridge and pocket. It is almost impossible to get it to return to floor level, even with forced circulation. These standards are general enough to give efficient results so that major building operations need not be entered into before the customer can be considered for gas heating service.

Step 4. Estimating Heat Losses

All of the gas space heating equipment that I have recommended, as suitable for our use, delivers heat directly from the equipment into the space to be heated. The only exception to this is the floor radiant or central type of heating systems. Gas space heaters, with the exception of the last two just mentioned, require air currents, or a free flow of air throughout the structure, to transfer heat from the unit to all parts of the spaces to be heated. This does not mean that just placing a unit in the center of the room will suffice. The divided-up building, like the home, must have sufficient doorways and open wall areas to allow a free flow of air to all parts of the structure.

When such an arrangement is impossible, then it is necessary to use two or more smaller heat units to take care of individual, isolated rooms. A drop in gas consumption of as much as 25% has been noted when buildings have been so divided in order to heat with more than one unit.

When selecting a location for a heater, always try to place it near the north side of a room. The reason is that air generally tends to circulate from north to south. It is a law of nature over which we have no control, where circulating air is used to transfer heat in a room.

Should Read Directions Carefully

I cannot stress too strongly the need for all installation men to read the directions for installing that are sent with all heaters. Take 15 or 20 minutes' time to read them over before you start work. It may save time on the installation and a lot of expensive service calls later on. All heaters have a maximum designed heat output which must be known when

making a selection of the proper size unit to fit the job.

A point to remember is that the flow of air through a heating unit is increased when the heater is operating and slows down as it cools off. This makes it necessary to have a heater of the right capacity to provide the best operation in the space to be heated. A heater too large can cause stratification and cold floors. A heater too small can cause excess gas bills.

I recommend that after you have decided that the structure to be heated meets the minimum standards of construction, to avoid excess heat leakages, that you proceed to estimate your heat loss on a basis which I have used, and which follows:

Take the gross cubic feet of the first floor space to be heated and multiply it by 8, 8.5 or 9 Btu's per cubic foot of such space to be heated. The selection of the coefficient depends on the degree day area in which you are located. These coefficients were arrived at after a careful study of over a thousand heating jobs as to their actual behavior in operation and gas demand.

Step 5. Installation of Equipment and Safety Rules

Safety rules for the installation of LP-Gas equipment are covered in Pamphlet 58 of the National Board of Fire Underwriters. Any dealer or installation man who pleads ignorance of what they contain for safety requirements has no place in the gas business.* Therefore, I urge each and every one of you to study these rules carefully and take them to heart.

The greatest abuse of the rules that I have found is in the installation of heating equipment of the unvented type in sleeping quarters and bath rooms. The greatest violations have been, and are still occurring, in roadside cabins or motels. When using an unvented heater in an area where people sit and relax, a good rule to follow is that its capacity shall be based on supplying heat on the ratio of 16 Btu's of heater input to 1 cubic foot of room space to be so heated. A 1000 cubic foot room means 16,000 Btu's of heater input.

When heaters are to be vented, venting instructions must be carried out. The size and runs of vents must be correctly run and angled. Do NOT leave the finishing of the venting of the appliance to the customer. This is your job.

Step 6. Gas Demand of Appliance

The maximum amount of gas a fixture will use is determined by taking its total Btu input and dividing it by the heating value of the gas in Btu's per cu. ft., pound or gallon depending on the unit of measurement which is used. These values are needed to determine the total demand on the storage systems when all appliances are in operation at the same

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*Another vital safety reference is the LPGA's book of recommendations for piping and appliance installations in buildings.—Editor.

time. The length and size of pipe needed to operate the equipment; the size of gas storage required to keep a customer adequately supplied between deliveries are dependent on this information. You must see that your tool kit is equipped with a gas service manual.

A little figuring and planning ahead will save many needless service calls at a later date. It is safe to follow these figures when talking to customers about actual yearly demand for the service rendered:

(1) Cooking 12 months a year—300 lbs.

(2) 30 gallon hot water heater—700 to 900 lbs. per year.

(3) Gas refrigeration—700 to 900 lbs. per year.

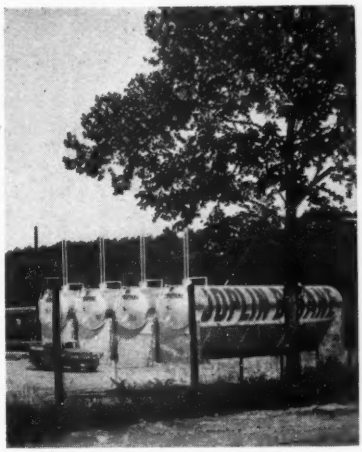
(4) Homes of 4 to 5 rooms—2000 to 3000 lbs. per heating season of 9 months. (December, January and February represent one-half of nine-month heating loss.)

When a kitchen heating stove is used, I find that it makes up about 25% of the total heating load of the home. It might interest you to know that it costs about $100 per year to run a kitchen stove in New England with oil. Most of this fuel is used for heating only and very little for cooking. Add to this the price of 4 tons of hard coal at $25 a ton to determine a yearly heating bill of from $180 to $200 in the New England states. If a careful study of fuel costs is made in the area in which you are located, similar to what I have described, you will find that gas heating can be done successfully.

Canadian Company Plans Big Advertising Program

The use of LP-Gas for internal combustion engines is spreading rapidly in Canada. To take advantage of this demand, Stewart Petroleums, Ltd., has established a complete propane service, in addition to its gasoline and oil services, in Alberta. This firm has been the wholesale distributor for the Union Oil Co of California since last April.

As part of the company's plan for publicizing its distribution of LPG, a widespread advertising program has been mapped out for them by R. M. Pritchard Advertising, of Calgary. This will include newspaper, radio, and direct mail.

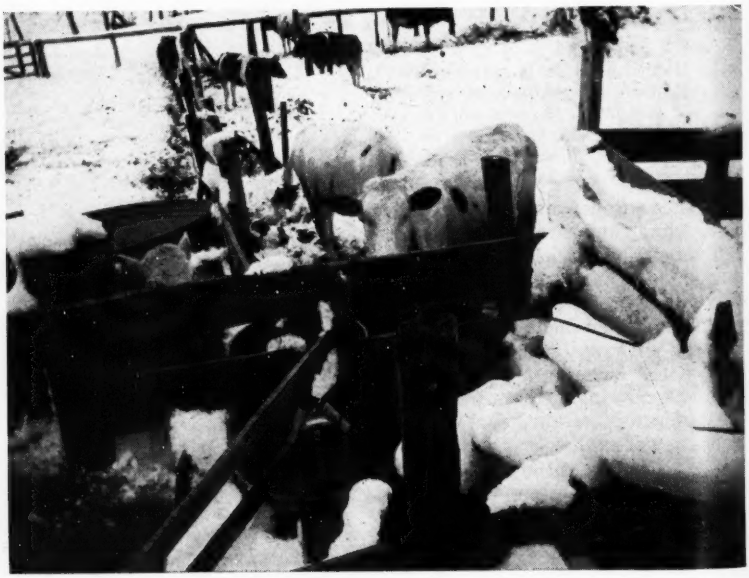


Joplin Butane Co., Joplin, Mo., recently installed these four storage tanks to eliminate possibilities of winter fuel shortages. The tanks, holding a total of 120,000 gals. of fuel, are located one mile north of company headquarters.

Showing Farmer Dollar Profits Makes Selling Easy For Dealer

THE LP-Gas fired stock tank heater is receiving considerable attention from the farmer on the strength of studies which indicate that it delivers pronounced increases in farm profits and cuts costs. Most important, it presents the rural dealer with an unexploited market which may be the key to continued sales where he previously has been unable to get a foothold.

It has been a matter of common knowledge that livestock sharply curtail their drinking when water reaches freezing temperatures. It also has been known that this habit has a direct effect on milk production and livestock weight.



Neither snow nor freezing temperature can deny stock warm water to drink when farmers install stock tank heaters like this one.

But it remained an inexact subject until the University of Idaho conducted extensive tests. Suddenly the farmer became aware of the fact that he was losing money in direct ratio to his herd's slowing gains in weight and yield of milk.

Figures were specific. Stock drink as much as 12 gallons of water per day under normal conditions. When water reaches, or drops below, the freezing point, animals consume just enough to stay alive—as little as 2½ gallons per day. But if the water is heated to 48° F, cattle continue to consume their average volume of water. When livestock had access to water heated to 48° F they gained 10% more weight than livestock that took water at freezing temperatures. Surprisingly, the feed bill was approximately 10% less when warm water was provided. Dairy herds produced from 5% to 10% more milk.

Shies at Losing Money

This proved to be a clincher for the farmer. He will rise before dawn and labor long after the sun sets. He will view the luxuries and even the labor-saving devices of life with great reserve. But let someone prove in black and white that he is unnecessarily losing money and he is willing to talk business.

Ingenious livestock operators devised tank heaters that burned cheap fuels—from firewood to corncobs. Unfortunately they didn't burn long enough. Ice still had to be chopped in the morning. They required laborious firing, fueling and banking. Ashes had to be cleaned out of the combustion chamber and were inevitably spilled in the drinking water. Sparks created a serious fire hazard.

Advantages of LPG for Stock Tank Heating

1. Increases stock weight.
2. Increases milk production.
3. Eliminates ice chopping.
4. Minimizes tank cleaning.
5. Eliminates oil film, ashes.
6. Provides automatic control.
7. Maintains even temperature.
8. Checks fire hazard.
9. Eliminates worry, inspections.
10. Eliminates hand firing.
11. Cattle drink more, eat less.

Electrical heating units were developed. They had to be located near power supply, often an impossibility, and they were subject to interruptions in service. They could keep only a part of the tank de-iced in order to operate economically. And there was always the danger of electrocution.

Coal and oil units had their try at the problem. They left oil films or soot on the water that cattle avoided and it was difficult, if not impossible, to control temperatures. Fuel supply was a laborious and unpleasant job.

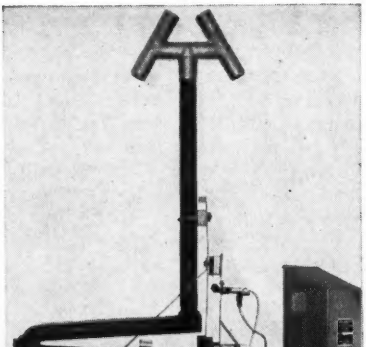
But the surface of a vast new market had been scratched just enough to interest dairy and livestock operators. The owner of a stock tank heater fired by one of the competitive fuels, means that the rancher is aware of the value of heating stock water and is prob-

ably willing to consider one of the superior models fueled by LP-Gas.

There are several stock tank heaters specifically designed for LP-Gas now on the market. An illustration of one of these, the Johnson Gas Appliance Co.'s automatic model, appears with this article.

The Johnson firm, which spent five years in research and design of the unit, has compiled significant material on stock tank water heating as the result of its experience in the practical field.

Harry Gieger, Amana farm manager, cites the results of tests conducted by the Amana Society, which operates more than 27,000 acres of farm land in central Iowa,



Johnson water warmer for manual operation when automatic and safety controls are not desired. Equipped with two Bunsen burners, one with 5000 Btu capacity and the other with 10,000 Btu capacity. Designed so that automatic and safety controls can be added later if desired.

in a letter to Harry G. O'Donnell, president of Johnson Gas.

"Our experience with your 'Water Warmer' was wonderful. Last winter, warm drinking water was available at 48° F to 300 head of steers weaned and put in feeding lots about Oct. 1.

Big Weight Increase

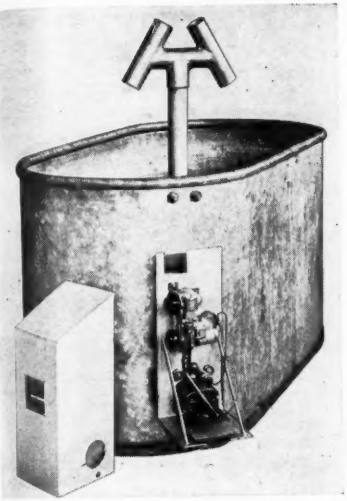
"The average weight at that time was about 300 pounds. The cattle were started on corn and protein about Nov. 1. Sold about March 30, the average weight of the cattle was about 630 pounds per head, an average gain of about 330 pounds in 150 days! That's a gain of 2.2 pounds per day.

"Late or small calves pay off when warm water is available at the time they are weaned. Previously, when water was either too hot or too cold, cattle would scour on full feed. This consisted of about 10 pounds of corn cob meal and 2 to 2½ pounds of protein feed at 7 a.m., then again at 4 p.m. each day.

"This season, with 48° water available, full feed was offered but reduced to about half the above corn and protein ration.

"Your 'Water Warmer' has been a time saver. In the morning we checked to see that the water level and the float were all right, and occasionally checked the automatic regulator. When it was necessary to have more gas we would call the serviceman who would change bottles.

"In past years, a coal burner was used which had to be watched all day and could not be depended on



Heater showing automatic controls.

through the night. The coal burner couldn't keep an even temperature and we also had trouble keeping the water clean. Ashes got into it continually."

The society reported that 400 pounds of LP-Gas was used to warm an average size tank between Nov. 15 and April 15. During the same period, a large tank consumed 550 pounds and a giant concrete tank used 1000 pounds—substantial loads.

The normal weight gain for 25 cattle fed unheated water is 5800 pounds, according to researchers. It was found that an added weight gain with LP-Gas fired stock tank heaters was roughly 580 pounds, a 10% increase.

Based on an average value of 21 cents per pound, the 25 cattle brought $121.80 more than their "cold-water" brothers. Savings in feed were quoted at $76.55, representing a total advantage of $198.35 for the 25 head.

Project those figures and it becomes apparent that 100 head would bring $793.40 more than cold-water cattle and 200 would bring $1586.80 more.

Reasons for the substantial increases are basic. Beef and milk are largely composed of water. Maintain an average consumption of water and growth and milk production are continued at highest levels.

Reduced feed requirements are brought about by two factors: (1) Normal water consumption means normal digestive efficiency; food is more easily converted into heat and energy. (2) Less heat (thus less feed) is required to bring extremely cold water up to body temperatures than is required when water is preheated to 48° F.

Profitable for Small Herds, Too

LP-Gas fuel costs are negligible and substantial profits assured. Large livestock operations realize a greater volume of profit, yet stock tank heating for small herds is well worth the investment. It is a tremendous labor saver for the farmer.

Since the first animal was domesticated thousands of years ago, man has been plagued with the problem of keeping drinking water free from ice. He made, and still makes, several trips to the water tank every day on an ice chopping expe-

The old style water tub offered a difficult problem to stock and farmer, alike.

dition. That often means walking as much as a mile to feeding lots, in storm and gale.

If he is one who owns a wood, coal or oil heater, it still means he must make several trips each day to see that the unit is operating. He must periodically remove ashes or oil carbon from the mechanism. He can't even be sure that it will last throughout the night. Many who now use LP-Gas admit that with their other heaters they were working harder than they had in their ice chopping days.

When the farmer buys an LP-Gas system his troubles are over. When the first frigid weather comes in the fall he merely lights the burner and makes the proper temperature control adjustment. The unit operates continuously throughout the winter and is finally turned off in the spring.

Most ranchers, unused to the brand of unfailing, automatic service provided with gas, make unnecessarily frequent checks at first. As its complete dependability becomes apparent, they follow a leisurely schedule. Johnson Gas reports that most of their customers check for proper operation but once a day. Some prefer manual control to the automatic thermostat, a matter of individual choice and the specific requirements of the job.

General specifications for stock tank heating require that the water be held at an even temperature. The heater should be capable of holding that temperature under ex-

tremely rigorous weather conditions with the thermometer as low as 20° below zero. It should be as draft proof as possible and guarded from contact with cattle. Fuel supply bottles or tanks and pipes should also be protected and of large enough capacity to provide long, uninterrupted service without freeze-ups.

The heater must be highly efficient, transferring the maximum amount of generated heat to the water before the products of combustion are released into the air. Many operators elect to build stock tank covers for use at night to minimize the transfer of heat from water to atmosphere, although such precautions are not mandatory.

Recommend 48° Temperature

The Johnson automatic heater is said to be capable of raising stock tank water to temperatures ranging from 40° to 80°, although the 48° setting is recommended. It incorporates a "heating tube" immersed in the water that is reputed to transfer 90% of the generated output to the water. The water then circulates within the tank and keeps the surface free from ice. The manufacturer claims that temperature variance in the tank does not exceed 2° at any point.

Automatic equipment is mounted on the side of the tank and protected by a strong metal cover. The heater vent is rugged, is rigidly attached, and is shielded to prevent contact with livestock. It is equipped with two burners, one of 5000 Btu output and another of 10,000 Btu output. Manual or automatic controls are optional although the automatic unit may be added after installation if desired.

The facts in stock tank heating are known. Thousands of LP-Gas-fired heaters of various makes are providing day-in-and-day-out service—and the farmer is interested. It is a great new market. Iowa, alone, has more than 200,000 farms. Best of all—the field has hardly been scratched.

Canadian Company Plans To Serve 50,000 Users

With an eye to the potentialities of the fast-expanding propane market, a group of Canadian and U.S. businessmen have formed a private company —Superior Propane Ltd.—to take over the propane business of Imperial Oil Ltd.

Marshall Rawle, New York business executive, represents the U.S. interests and is the first president. Ian Crookston, Toronto investment dealer, is one of the Canadian directors.

"We plan expanding business in the Ontario areas presently served by Imperial to the point where we will be handling the requirements of 50,000 customers or more, rather than 10,000 as at present," Mr. Crookston says.

Principal market will be household, commercial and small industrial firms but directors aren't overlooking the possibilities of propane as a fuel for aircraft, trucks and buses, tractors, etc. Superior plans to remain essentially a retailing body, buying its propane requirements from Imperial Oil's Sarnia plant.

The new company has purchased from Imperial all the assets connected with the propane retailing business, including trucks, metal cylinders and bottling plants at Stratford, Carleton Place, Belleville and Maple.

PRACTICAL MANAGEMENT

OF AN LP-GAS BUSINESS

CHAPTER 8

How to Establish a Pound Gas Rate Equivalent to Electricity

LET us start with facts pertaining to electric rates. I have said that we were not competitive to electricity in the lighting and small appliance field, and at this time we pretty much have let "Reddy Kilowatt" have the refrigeration field to himself. This means that in order to be competitive we must start at that part of the electric rate which pertains to cooking and continue on with it through its water heating phase.

We must meet upon some common ground in regard to energy requirements. Let us accept the electric industry's allocation of the household electric bill. As stated in Chapter 7, 25 kwh per month are supposed to take care of lights and small appliances, 30 kwh per month are for refrigeration, 100 kwh per month for cooking and 340 kwh per month for water heating.

Applying this division of monthly electric consumption to the typical rate schedule given in Chapter 7, we found that the 100 kwhs per month for cooking would cost $2.45 and the 340 kwhs for water heating would cost $3.85. What would propane cost?

If you are selling propane by the pound through pound meters, and

By C. C. TURNER

read those meters every month, your establishment of a competitive rate is a simple problem. Accepting an energy ratio of 4.75 in domestic cooking and 4.671 in water heating you can solve it quickly. The 100 kwh used for cooking cost a total of $2.45 and the cost was computed as follows:

15 kwh @ 5c.....$0.75

85 kwh @ 2c.....$1.70

The number of pounds in cooking equivalent to 15 kwh would be 15/4.75=3.15, so the first 3.15 lbs. used in any month could cost $0.75/3.15=23.8c per lb. In actual practice you would drop the decimals in the number of pounds, divide $0.75 by 3 and charge 25c per lb. for the first three pounds.

The remaining 85 kwh are equivalent to 85/4.75=17.8 lbs. Those 85 kwh would cost $1.70, so the 17.8 lbs. of propane could cost $1.70/17.8=9.55c per lb. Here, as in the previous case, you would drop the decimals in the number of pounds, divide $1.70 by 17 and charge 10c per lb. for the next 17 lbs.

The 340 kwh devoted to water heating would be equivalent to 340/4.671=72.78 lbs. As these 340 kwh would cost $3.85 as determined in Chapter 7, then the 72.78 lbs. of propane could cost $3.85/72.78= 5.28c per lb. If you drop the decimal from the pounds you would divide $3.85 by 72 which would give you 5.3c per lb.

Any gas used over and above those pounds equivalent to the 340 kwhs used in water heating would have to meet a 1c per kwh rate, and as they would either be an extension of the cooking and water heating load or devoted to space heating we must select a ratio which can be applied to them. In unvented space heating we can swap Btu for Btu with Reddy Kilowatt, so it could be 21,633/3412 =6.34 kwhs equivalent to 1 lb. of propane gas.

Here, however, another factor enters the problem. No matter what the source of heat is, it is best to have some changing of the air in the room if for no other purpose than to make it fit for human habitation. One person vitiates 1500 cubic feet of air per hour by breathing alone. Vented gas heaters which are properly installed and balanced to the heating job which they have to perform attain efficiencies of 70% or better, so if Reddy Kilowatt can show a space heating efficiency of a near-perfect 95%, then the ratio energy would be 4.67 kwhs of electricity to 1 lb. of propane gas (21,633 x .70/3412 x .95), the same as in water heating. This means that at 1c per kwh, 1 lb. of propane would have to sell at 4.67c, so for gas uses in extension of the water heating load or for space heating requirements we would now change our rate to 4.67c per lb.

The composite gas rate now stands as follows:

1st 3 lbs. a month, 25c per lb.
Next 17 lbs. a month, 10c per lb.
Next 72 lbs. a month, 5.3c per lb.
All over 92 lbs. a month, 4.67c per lb.

As the pound-seller usually thinks in terms of 100-lb. cylinders, and is dismayed at the thought of selling a cylinder of gas at any such

Table 10. Establishment of a gas price per cylinder competitive to an electric rate of 1st 15 kwh at 5c; next 85 kwh at 2c (cooking); next 45 kwh at 2c; next 295 kwh at 1c (water heating); and all over 440 kwh at 1c with ratio of 4.67 kwh equal to 1 lb. of propane for all over 440 kwh.

No. of 100-lb. capacity cyls. per year	Equivalent lbs. propane gas per month	Lbs. of propane @ 25c	Amount in dollars	Lbs. of propane @ 10c	Amount in dollars	Lbs. of propane @ 5.3c	Amount in dollars	Lbs. of propane @ 4.67c	Amount in dollars	Total monthly gas bill in dollars	× 12 = total yearly gas bill in dollars	Divide by No. cyls. per year	Average price per 100-lb. cyl.
1	8.33	3	0.75	5.33	.53					1.28	15.36	1	15.36
2	16.66	3	0.75	13.66	1.37					2.12	25.44	2	12.72
3	25	3	0.75	17	1.70	5	0.27			2.72	32.64	3	10.88
4	33.33	3	0.75	17	1.70	13.33	0.71			3.16	37.92	4	9.48
5	41.66	3	0.75	17	1.70	21.66	1.15			3.60	43.20	5	8.64
6	50	3	0.75	17	1.70	30	1.59			4.04	48.48	6	8.08
7	58.33	3	0.75	17	1.70	38.33	2.03			4.48	53.76	7	7.68
8	66.66	3	0.75	17	1.70	46.66	2.47			4.92	59.04	8	7.38
9	75	3	0.75	17	1.70	55	2.92			5.37	64.44	9	7.16
10	83.33	3	0.75	17	1.70	63.33	3.36			5.81	69.72	10	6.97
11	91.66	3	0.75	17	1.70	71.66	3.80			6.25	75.00	11	6.81
12	100	3	0.75	17	1.70	72	3.82	8	.37	6.64	79.68	12	6.64
13	108.33	3	0.75	17	1.70	72	3.82	16.33	.77	7.04	84.48	13	6.49
14	116.66	3	0.75	17	1.70	72	3.82	24.66	1.15	7.42	89.04	14	6.36
15	125	3	0.75	17	1.70	72	3.82	33.00	1.54	7.81	93.72	15	6.24
16	133.33	3	0.75	17	1.70	72	3.82	41.33	1.93	8.20	98.40	16	6.16
17	141.66	3	0.75	17	1.70	72	3.82	49.66	2.32	8.59	103.08	17	6.06

15	125	3	0.75	17	1.70	72	3.82	33.00	1.94	7.81	93.72	15	6.24
16	133.33	3	0.75	17	1.70	72	3.82	41.33	1.93	8.20	98.40	16	6.16
17	141.66	3	0.75	17	1.70	72	3.82	49.66	2.32	8.59	103.08	17	6.06
18	150	3	0.75	17	1.70	72	3.82	58	2.71	8.98	107.76	18	5.98
19	158.33	3	0.75	17	1.70	72	3.82	66.33	3.10	9.37	112.44	19	5.91
20	166.66	3	0.75	17	1.70	72	3.82	74.66	3.49	9.76	117.12	20	5.85
21	175	3	0.75	17	1.70	72	3.82	83.00	3.88	10.15	121.80	21	5.80
22	183.33	3	0.75	17	1.70	72	3.82	91.33	4.27	10.54	126.48	22	5.74
23	191.66	3	0.75	17	1.70	72	3.82	99.66	4.65	10.92	131.04	23	5.69
24	200	3	0.75	17	1.70	72	3.82	108	5.04	11.31	135.72	24	5.65
25	208.33	3	0.75	17	1.70	72	3.82	116.33	5.43	11.70	140.40	25	5.61
26	216.66	3	0.75	17	1.70	72	3.82	124.66	5.82	12.09	145.08	26	5.58
27	225	3	0.75	17	1.70	72	3.82	133	6.21	12.48	149.76	27	5.54
28	233.33	3	0.75	17	1.70	72	3.82	141.33	6.60	12.87	154.44	28	5.51
29	241.66	3	0.75	17	1.70	72	3.82	149.66	6.99	13.26	159.12	29	5.48
30	250	3	0.75	17	1.70	72	3.82	158	7.38	13.65	163.80	30	5.46

price as $4.67 per cylinder, I have converted these figures into a price schedule based upon the number of cylinders used per year. This will be found in Table 10, and it is worthy of much study and thought.

Before we delve into how such a table is computed let us first jump to column "N". The average home using gas for cooking and water heating uses from 800 to 1200 lbs. of propane per year, or from 8 to 12 cylinders. It will be noted from this column that propane can be competitive at prices from $7.38 down to $6.64 in the 8 to 12 cylinder-per-year bracket. Propane can be sold profitably in these price brackets and even at lower prices if you operate efficiently.

If you are a pound-seller you will have occasion to compute tables such as Table 10, and you should know how it is done. There are short-cuts in the method, but I have purposely taken the long way around in order that you might understand each step. First you will have to establish the number of pounds equivalent to electricity in each bracket of the electric rate, using conversion energy ratios which you determine are correct for the type of service and the kind of fuel that you sell.

That is where Tables 8 and 9 come in. You are now ready to compile your competitive gas tariff as in Table 10. Column A is the number of cylinders of gas sold per year. Column B is the number of pounds of propane used per month, which is arrived at by multiplying the number of cylinders per year (column A) by 100 and

dividing by 12. As the number of pounds of gas to be sold in the highest price bracket (in this case 3 lbs. at 25c) is less than the total number of pounds per month, this quantity is set down in column C. What is left over goes in column E up to 17 lbs., and the excess is carried over into column G up to 72 lbs., after which the excess is carried over into column I. Columns D, F, H and J are the equivalents of columns C, E, G and I in dollars and cents, and column K is the sum of these columns in dollars and cents, this being the cost of gas to the customer per month. Column L is the yearly gas fuel bill which is computed by multiplying column K by 12 because there are 12 months in the year. Column M is a repitition of column A for convenience, and the average price per cylinder is arrived at in column N by dividing column L by column M.

It will be noted that the spread between the average prices per cylinder in column N is a considerable amount in dollars and cents at the top of the column but that it diminishes progressively as the number of cylinders per year increases. Because the lowest electric rate of 1c per kwh hour never becomes an average rate neither does the price of 4.67c per pound ever become an average rate for propane.

Table 11 is a further development of Table 10 and in it columns A, B, I, J, K, L, M and N represent the same values as in Table 10. Column CEG combines the C, E and G columns of Table 10, and column DFH is the value of column CEG in dollars and cents, it also combining the functions of columns D, F and H in Table 10.

Table 11 is recognition of the decreasing variation in average prices as quantities increase, for which reason jumps of 10 cylinders per year are made from 40 through 150 cylinders after which the jumps are in quantities of 50 cylinders. Note that because the difference in average prices per cylinder are in fractions of a cent, that from 400 to 450 cylinders the price would be the same, and that the quantity range at a given price continues to increase, for there is not the difference of a penny in the average price from 800 to 1000 cylinders.

Bracketing Procedure

This brings us to the subject of "bracketing." The word "bracket," combined with either the word "price" or "quantity," indicates the establishing of one price for a unit of gas within certain quantity limitations. Let us say that the largest customer that you might be called upon to serve with cylinders in your particular territory might need 500 cylinders per year. Not only would a price list be confusing that covered this entire range cylinder by cylinder, but it would be cumbersome, impossible to memorize and conducive to errors. It is customary to "bracket" prices for reasons which are now given.

It doesn't require a mathematician to determine that the customer who uses but one cylinder a year is not a profitable one, and the one who uses but two cylinders per year is not much better. With three

Storage Called Number One Problem Of 'Unbalanced' LP-Gas Industry

Storage is the key to successful distribution of liquefied petroleum gas, Howard Felt, vice president of Warren Petroleum Co., Tulsa, told members of the API Refining Division at a session on LP-gas in Tulsa May 3.

"The foundation of satisfactory and successful distribution of LP-gas is storage," he said. "The amount of transportation needed, and to a large [illegible] bulk [illegible] ter is by all odds the industry's No. 1 problem."

He pointed out, "The summer load which can be developed to offset the heat load is extremely desirable and well worth the strenuous efforts now being put forth; but, industrywise, it is doubtful if it ever will equal the winter demand for heat. Therefore, the ultimate approach to LP-gas Utopia is through storage."

Clipping from National Petroleum News issue of May 23, 1951

Install ROCKWELL LP-Gas Meters and Lick the Storage Problem

USE YOUR CUSTOMERS' TANKS FOR STORAGE

With a Rockwell meter guarding every service you can fill your customers' tanks at any time to augment your own limited bulk storage facilities.

Think what this means. First, you won't need to make a heavy investment in additional central storage facilities to take care of increased business. Second, you can buy LP-gas in larger quantities at seasonally advantageous prices. Third, you can reduce your year-round delivery costs.

Such savings will quickly offset your nominal initial investment in Rockwell meters and will soon reflect in increased profits. Just try them and see. Write for prices and full details.

ROCKWELL MANUFACTURING COMPANY

Pittsburgh 8, Pa.

Atlanta Boston Chicago Columbus Houston Kansas City
Los Angeles New York Pittsburgh San Francisco Seattle Tulsa

THE METERS YOU NEED

Especially designed for this service. Dependably accurate. Ample capacity for today's and tomorrow's loads. Light in weight. Easy to handle and install.

Table 11. Establishment of a gas price per cylinder competitive to an electric rate of 1st 15 kwh at 5c; next 130 kwh at 2c (95 kwh in cooking, 45 kwh in water heating), all over at 1c ratio in last bracket being 4.67 kwh equal to 1 lb. of propane.

No. of 100-lb. capacity cyls. per year	Equivalent lbs. propane gas per month	Lbs. per month 1st 3 price brackets	Amount in dollars	lbs. @ 4.67c	Amount in dollars	Total monthly gas bill in dollars	× 12 = yearly gas bill in dollars	Divide by No. cyls. per year	Average price per 100-lb. cyl. to be equivalent to elec.
A	B	CEG	DFH	I	J	K	L	M	N
40	333.33	92	6.27	241.33	11.27	17.54	210.48	40	5.26
50	416.66	92	6.27	324.66	15.16	21.43	257.16	50	5.14
60	500	92	6.27	408	19.05	25.32	303.84	60	5.06
70	583.33	92	6.27	491.33	22.95	29.22	350.64	70	5.00
80	666.66	92	6.27	574.66	26.84	33.11	397.32	80	4.96
90	750	92	6.27	658	30.73	37.00	444.00	90	4.93
100	833.33	92	6.27	741.33	34.62	40.89	490.68	100	4.90
110	916.66	92	6.27	824.66	38.51	44.78	537.36	110	4.88
120	1000	92	6.27	908	42.40	48.67	584.16	120	4.86
130	1083.33	92	6.27	991.33	46.30	52.57	630.84	130	4.85
140	1166.66	92	6.27	1074.66	50.18	56.45	677.40	140	4.83
150	1250	92	6.27	1158	54.08	60.35	724.20	150	4.82
200	1666.66	92	6.27	1574.66	73.53	80.00	960.00	200	4.80
250	2083.33	92	6.27	1991.33	93.00	99.27	1191.24	250	4.76
300	2500	92	6.27	2408	112.45	118.72	1424.64	300	4.75
350	2916.66	92	6.27	2824.66	131.91	138.18	1658.16	350	4.73
400	3333.33	92	6.27	3241.33	151.37	157.64	1891.68	400	4.72
450	3750	92	6.27	3658	170.82	177.09	2125.08	450	4.72
500	4166.66	92	6.27	4074.66	190.28	196.55	2358.60	500	4.71
550	4583.33	92	6.27	4491.33	209.74	216.01	2592.12	550	4.71
600	5000	92	6.27	4908	229.20	235.47	2825.64	600	4.70
650	5416.66	92	6.27	5324.66	248.66	254.93	3059.16	650	4.70
700	5833.33	92	6.27	5741.33	268.12	274.39	3292.68	700	4.70
750	6250	92	6.27	6158	287.58	293.85	3526.20	750	4.70
800	6666.66	92	6.27	6574.66	307.04	313.31	3759.72	800	4.69
850	7083.33	92	6.27	6991.33	326.49	332.76	4005.12	850	4.69
900	7500	92	6.27	7408	345.95	352.22	4226.64	900	4.69
950	7916.66	92	6.27	7824.66	365.41	371.68	4460.16	950	4.69
1000	8333.33	92	6.27	8241.33	384.87	391.14	4693.68	1000	4.69

cylinders per year the customer becomes marginal, so price reductions in the small user class should be grudgingly made. There are two schools of thought as to how progressively reducing prices should be applied to the customer. One group favors "flat" pricing which means that the number of cylinders which a customer may use in the first year is estimated and a flat price is granted on this basis.

As an example, let us refer to Table 10, estimating that a certain customer will use 10 cylinders per year. The "flat" pricers would immediately grant him a $6.97 rate per cylinder during the first year. This method of pricing has the advantage of simplicity, excepting that if the customer should happen to use 13 cylinders the average prices should be $6.49 instead of $6.97, and you can rest assured that the customer would ask for a rebate of $6.97—$6.49=$.48 per cylinder on the first 10 cylinders, and other adjustments on the 11th and 12th cylinders.

Dealer Might Lose

On the other hand, if the customer only uses 6 cylinders instead of the estimated 10 he should have paid $8.08 per cylinder instead of $6.97. This is a difference of $1.11 per cylinder or $6.66 on 6 cylinders. In this case the dealer will lose revenue to which he is entitled. It is all very well to say that the customer can be billed back for the difference, but show me the gas merchandiser who has the nerve to do this or the housewife who will meekly pay such a bill without raising a rumpus.

The other school of thought believes in the "progressive" method of pricing. Under the system of progressive pricing the customer goes back to a high price at the beginning of each year and gradually works down into a lower price as he purchases additional cylinders.

Progressive Pricing

Let us examine in some detail how the progressive method of pricing works. At the first of each year the customer goes back to a price of $15.36 for the first cylinder. In column L of Table 10 it will be noted that two cylinders should cost the customer $25.44, so the second cylinder would be priced at $25.44 less $15.36 or $10.08. The customer should buy 3 cylinders for $32.44, so the third cylinder should cost him $32.64 less $25.44 or $7.20. The fourth cylinder would be $37.92 less $32.64 or $5.28. The fifth cylinder would be $43.20 less $37.92 or $5.28.

Add these prices together, $15.36, $10.08, $7.20, $5.28 and $5.28. The total is $43.20 or an average of $8.64, which is just what the customer should pay to be competitive to the electric rate selected for comparison. Note that the 4th and 5th cylinders would cost $5.28 each. We shall have more to say about this in a few minutes.

Those who advocate the flat pricing basis say that the customer cannot be brought back to a high price at the beginning of each year. That this is not so has been demon-

Don't use the calendar year for "progressive pricing" if you would avoid the December pinch.

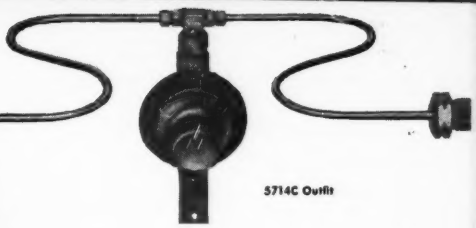
strated by many gas distributors who have been using the progressive system for years. Furthermore, why should it not be possible for the gas operator to do once a year what Reddy Kilowatt does 12 times a year? Another objection brought up by the flat-pricers is that at the beginning of each year the gas operator is flush with money because of high gas prices and is pinched for money at the end of the year. This is a fair criticism of progressive pricing if the calendar year is used as a basis for pricing, but an easy and fair way to eliminate this objection is to adopt what is known as the "price-scale-year." A "price-scale-year" begins on the anniversary of the installation date and ends one year from that date. In this way the dealer does not have peaks and valleys of high and low priced gas.

In the preceding paragraph I asked you to note that the 4th and 5th cylinders each cost $5.28, and here is where we really get down to the bracketing of prices. There are many ways of doing this, but the important thing to bear in mind is that any bracketing should (1) not deprive you of profits and (2) keep you in a competitive position with electricity. It is not a difficult problem in the large quantity zone, for here average prices even out over a considerable range.

Examples for Table 10

Take as an example the average per cylinder prices in Table 10 from 26 through 30 cylinders. Here we have cylinders at $5.58, $5.54, $5.51, $5.48 and $5.46, the average of which is $5.51. This suggests $5.50 in this bracket. Let's work backward in the next group of five which is composed of $5.80, $5.74, $5.69, $5.65 and $5.61. This totals 28.49 with an average of $5.69 which suggests $5.70.

Let's try again. In the 16 through 20 cylinder group the prices are $6.16, $6.06, $5.98, $5.91 and $5.85 with an average of $5.99 which suggests $6.00. Here the spread between the top and the bottom of the bracket varies too much from



5714C Outfit

RegO Outfits for Portable Cylinder Systems which incorporate a Check-Valve Manifold are low in cost and high in dependability.

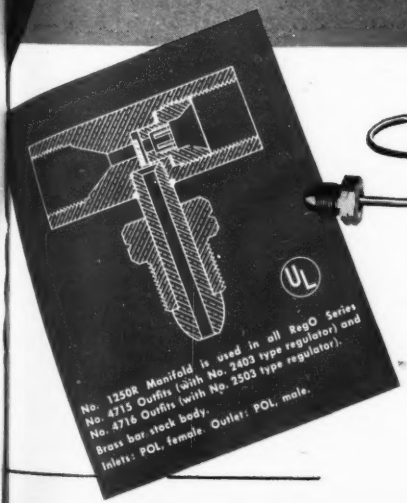
A check-valve type manifold permits replacement of the empty cylinder in a system without disrupting service to the appliances. The full cylinder does not have to be shut off, as the check-valve in the manifold prevents excessive leakage of gas while the empty cylinder is being disconnected and replaced with a full one.

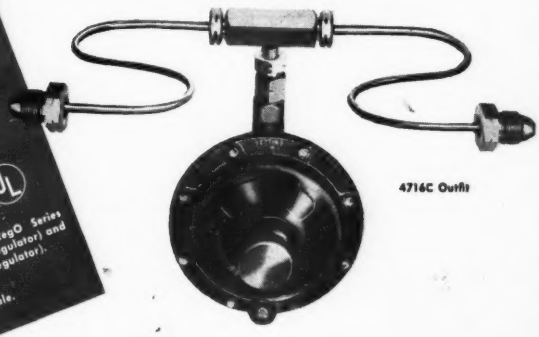
Each Outfit consists of:

Check-Valve Manifold (type as selected)

Low Pressure Regulator (three sizes available)

Flexible Copper Pigtails (straight, loop or S bend)





4716C Outfit

Table 12. Flat Pricing Methods. Suggested bracketed price list for propane gas in 100-lb. cylinders in competition with electricity at 5c per kwh for 15 kwh, 2c per kwh for 130 kwh, and 1c per kwh for all over that amount. Cooking energy ratio 4.75 kwh to 1-lb. propane for equivalent of 100 kwh used in cooking, balance at an energy ratio of 4.67 kwh to 1 lb. of propane.

No. of 100-lb. cyls. per yr.	Average price per Table 10	Suggested adjusted price per cyl.
1	15.36	15.35
2	12.72	12.70
3	10.88	10.90
4	9.48	9.50
5	8.64	8.65
6	8.08	8.10
7	7.68	7.70
8	7.38	7.40
9	7.16	7.15
10	6.97	7.00
11-13	6.81 to 6.49	6.65
14-16	6.36 to 6.16	6.25
17-20	6.06 to 5.85	5.95
21-25	5.80 to 5.61	5.70
26-30	5.58 to 5.46	5.50

No. of 100-lb. cyls. per yr.	Average price per Table 11	Suggested adjusted price per cyl.
31-40	5.26	5.35
41-50	5.14	5.20
51-60	5.06	5.10
61-70	5.00	5.00
71-100	5.00 to 4.90	4.95
101-200	4.90 to 4.80	4.85
201-350	4.80 to 4.73	4.75
351-1000	4.73 to 4.69	4.70

Re-cap of Price List

Cyls. per year	Price per cyl.	Cyls. per year	Price per cyl.
1	15.35	17-20	5.95
2	12.70	21-25	5.70
3	10.90	26-30	5.50
4	9.50	31-40	5.35
5	8.65	41-50	5.20
6	8.10	51-60	5.10
7	7.70	61-70	5.00
8	7.40	71-100	4.95
9	7.15	101-200	4.85
10	7.00	201-350	4.75
11-13	6.65	351-1000	4.70
14-16	6.25		

the average price, so let's try again by taking $6.06, $5.98, $5.91 and $5.85 which averages $5.95. That is better.

It is best to have not over 20c between the top and the bottom of the prices which you are averaging if you can help it. Working backward this would confine us to $6.16, $6.24 and $6.36 in the next bracket,

with an average of $6.64, which suggests $6.65. From this point back to the top of the price scale I would go by individual cylinders, excepting that I would adjust each price into a multiple of 5c. This facilitates making change when cylinders are delivered and makes the bookkeeping problem easier. Bracketing is a matter which would be handled differently by every person who had occasion to do it, but in Table 12 I am offering a suggested method of doing it in competition with the electric rate which we have selected as an example. Table 12 is, of course, for the use of those who prefer the flat method of pricing. (Refer back to Page 82.)

Bracketing for the progressive method of pricing is an entirely different matter which we will take up in the next chapter which will appear in December.

Texas Industrymen Host Banquet for LPG Commission

As an expression of appreciation for the work it is doing, the Texas Railroad Commission was honored by the LP-Gas industry in the state at a banquet recently in Austin at which officers and directors of the Texas Butane Dealers Assn. represented industrymen.

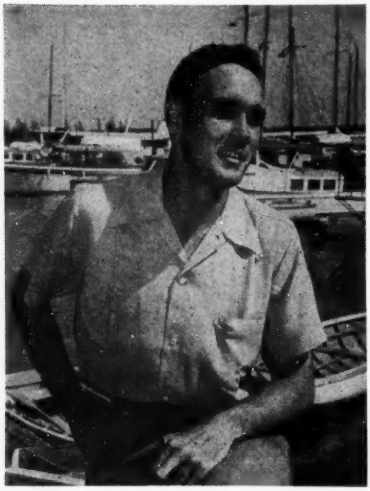
Guests at the occasion included Rep. William S. Fly, Sen. Gus Strauss, sponsors of the legislation which created the LP-Gas Division of the Commission, and S. C. McIntosh, director of the commission.

Bahamas Islands Gain Luxury Of Living With Butane Gas

By L. LOURIE

THE introduction of butane to one of the best known tourist resorts in the world was brought about two years ago when the Bahamas Gas & Fuel Co., Ltd., was organized on the sub-tropical island of New Providence, part of the Bahamas group, with Nassau as its capital.

The Bahamas, which are a part of the British Empire, have become one of the best known tourist resorts in the world today. They are visited annually by thousands of Americans, some as regular winter residents, and others for a holiday.



Robert H. Symonette, owner of butane distribution plant in the Bahamas.

Situated in the Atlantic ocean, only 55 minutes by air from the coast of Florida, New Providence has no need for a railway as its total length is 21 miles. It is not cut off from the outside world as it is served day and night by international air lines as well as by freight and passenger ships.

Butane, brought from the United States on landing craft barges used in World War II, has solved one of the greatest needs of the Bahamas. "Bahamas Gas" has become a byword in the British colony, and its fuel has become the most popular among visitors and residents alike.

All Hotels Use Butane

Probably the most important part of the island life centers in the hotels, for the tourist industry is nearly the only one, and it is interesting to note that all the hotel operators use butane gas for their large tourist trade.

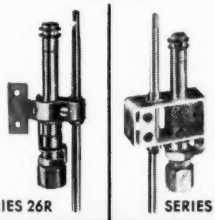
Operated by only five men, the

NOW!

NEW "GG" WATER HEATER CONTROL

BY GENERAL CONTROLS

Grayson-Greenamyer Appliance Controls Division



OPTIONAL **AGA and UL APPROVED PILOT-BURNERS**

100% SAFETY SHUT-OFF...

TOP QUALITY...AT LOWER COST

Here is the *new* GENERAL CONTROLS water heater control–the GG-2 model, that delivers safe, efficient operation at remarkable cost saving figures.

Its new, simplified design assures years of trouble-free performance. Built for all gases, it offers 100% shut-off, easy servicing with standard tools.

Notice the "all in one" single couple pilot burner, –its unique design provides stable ignition and thermocouple flame regardless of gas pressure, altitude or primary air conditions.

This General Controls water heater control is news in the appliance field today. Immediate delivery, write for Catalog GG-2.

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GRAYSON-GREENAMYER APPLIANCE CONTROLS DIVISION

FACTORY BRANCHES: Baltimore, Md., Birmingham, Ala., Boston, Mass., Buffalo, N.Y., Chicago, Ill., Columbus, Ohio, Cleveland, Ohio, Dallas, Texas, Denver, Colo., Detroit, Mich., Houston, Texas, Indianapolis, Ind., Kansas City, Mo., Milwaukee, Wis., Minneapolis, Minn., Newark, N.J., New York, N.Y., Omaha, Neb., Philadelphia, Pa., Pittsburgh, Pa., St. Louis, Mo., Salt Lake City, Utah, San Francisco, Calif., Seattle, Wash., Tulsa, Okla., Washington, D.C., Los Angeles, Calif.

Bahamas Gas & Fuel, associated with Green's Fuel, Inc., Florida, purchases gas in tank car loads in Miami. The gas is then pumped into a 13,000-gal. transport tank on an LCT which conveys the gas to Nassau. After it is pumped from the LCT tank into 1000-gal. tank trucks, it is delivered to the company storage tank at the depot at Oakes airfield. At the depot it is put into 100-lb. cylinders, ready for delivery to the customers. Although 100-lb. cylinders are generally used, storage tanks holding up to 1000 gals. are installed by hotels and other large establishments.

Checks Installations Monthly

Approximately twice a month a representative from the gas company visits every consumer to check the installation. Every consumer has two cylinders which retail at $12 each. There is no charge for the cylinder.

With a total storage capacity of 58,000 gals., Bahamas Gas, owned and managed by R. H. Symonette, believes it has adequate fuel supply for any emergency that might arise.

Part of the fuel storage of Bahamas Gas & Fuel Co., Ltd., at Nassau, Bahamas Islands.

One of the 1000-gal. delivery tank trucks serving butane users in the Bahamas.

Storms Demoralize Electric Service

The Bahamas unfortunately sometimes suffer severely during the hurricane season and in such emergencies all electricity is immediately turned off. The only method of cooking, apart from the old fashioned kerosene stove, is by butane.

One of the most noticeable features about the green and silver company vans that tour around the island delivering gas is the excellent condition in which they are kept. The bottles are re-painted and re-conditioned at frequent intervals when returned to the plant for refilling. When asked if this was not very expensive, Mr. Symonette replied that to keep his trucks and bottles clean, well painted and in bright colors, increased his business immensely.

Life is made very easy for the housewife in the Bahamas through the use of butane gas and the excellent service of the Bahamas Gas & Fuel Co.

Pays Employes Extra Money To Inspire Extra Effort

GIVING recognition to the fact that every salesman and every employe of the firm must "make a dollar for themselves before they make one for the boss," and building his entire merchandising program around it, has paid rich dividends for Larry F. Kahl, head of Kahl Appliance Co., LP-Gas and appliance dealer in Freeport, Ill.

Mr. Kahl, now in his 11th year of appliance merchandising, has had no personnel turnover problem since he hit upon this system, and his volume has grown from $18,000 gross during the first year, to an all-time high last year of nearly $300,000. He has extended his territory around Freeport until he currently services more than 50% of all the butane-propane users in the community, and his brand of "K-L gas" is as familiar to the average farmer as nationally advertised products on roadside signboards.

Learned Other Dealers' Problems

When he first entered the field, Mr. Kahl spent a lot of time in visiting other dealers, and found that the most universal complaint on the part of each was the difficulty of keeping not only salesmen, but mechanics, drivers, and even office personnel. Investigating further, Mr. Kahl likewise found that the chief discouragement which resulted in employe turnover, was a tight ceiling imposed on their earnings by the nature of the job, or else that the salesman was given a difficult territory in which he was "expected to work miracles." In many stores, the Illinois dealer found little liaison between employes and "the boss" and, consequently, a lack of understanding and good will which did nothing to keep the valuable employe on the payroll.

Therefore, Mr. Kahl, during the

L. F. Kahl studying blueprints for his new home.

By GENE CREIGHTON

The Houston Plant, one of the A.O. Smith fab-

Self-Unloading Truck-Trailers Deliver A.O.Smith Liquid Gas Systems ANYWHERE

From warehouse or rail docks, modern trucking equipment brings new convenience to A. O. Smith dealers everywhere. Eliminating dealer pick-up or shipments, this service is tailored to your needs.

Just one of the advantages A.O. Smith dealers enjoy, direct-to-yard truck delivery highlights the service which we offer dealers in liquid petroleum gas.

Our warehouses at Cincinnati, Dallas, Denver, Evansville, Houston, Jeffersonville, Ind., Knoxville, Los Angeles, Omaha, Panama City, Fla., Peoria, Roswell, N.M., St. Paul, Salt Lake City, San Antonio, Seattle and Union, N.J., plus fast rail service from Houston at low F.I.T. rates west of the Mississippi, assure satisfaction.

Send the coupon for complete information.

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Send me, without obligation, full information about A.O.Smith Liquid Gas Systems and the sales advantages which can mean more profitable business for me.

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Address_____

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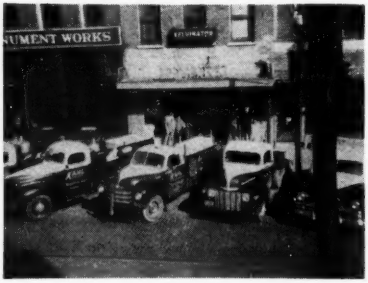
past 10 years, has deliberately budgeted at least 5% more on his annual gross volume into the payroll than is normally considered judicious and, in addition, he provides every employe with a long list of "benefits" which make "working for Larry Kahl a pleasant thing, indeed." First, he pays all of his employes, from a stenographer to the top salesman, on a liberal scale which is approximately 10% better than in competing stores, or even in nearby Chicago. If an employe investigates the possibilities of another job elsewhere, he finds that the change would represent an immedate reduction in income. Every selling employe is paid on a quota system, which rewards him with additional commission on all sales over a set, easily-made quota, and the store gladly pays out many hundreds of dollars in additional commissions in this way—well aware that 3% on sales above a quota, for example, is the lowest possible selling cost!

Next, Mr. Kahl has paid a lot of attention to the opinions which his employes have of "the boss." He has a horror of depressing days and discouraging seasons, when there are few customers available. His "antidote" is to take the entire employe staff to a baseball game, on a trip to nearby Chicago, or if nothing else is available, to send out for the refreshments to stage a party right in the store. Instead of sitting listlessly in the store, waiting for a possible customer to drop in, employes are animated, vivacious, and sure that they are working for "the nicest boss in the business," which Mr. Kahl feels is excellent psychology.



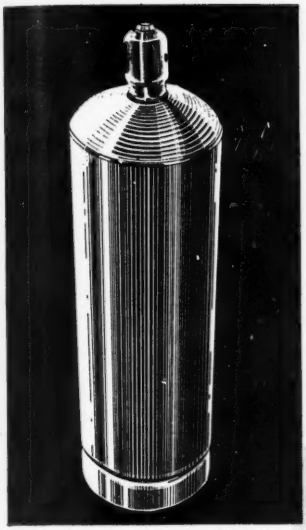
Company trucks lined up in front of Kahl Appliance Co. in Freeport, Ill.

Employes Visit Market Shows

Next, he makes all of his salesmen "partners" in the sense that each gets an opportunity to visit market shows, conventions, manufacturers' exhibits, etc. The entire sales staff goes along whenever the manufacturer of Kahl Appliance Co.'s appliance lines shows its new wares every spring. Salesmen come back from such market visits fired up with enthusiasm, and ready to put their vastly better knowledge of the product to immediate use.

Available to every employe, in addition to the usual paid vacations, hospitalization plan and "sick leave," Mr. Kahl has come up with some highly unusual extras. Included is a cash pool, from which any employe may borrow, without interest, to meet sudden unexpected bills. When an employe buys a new home, Mr. Kahl will cheerfully put up the financing, and the employe saves the entire interest cost. This latter, incidentally, has probably won more good will than any other single feature. Also Mr. Kahl has probably looked further ahead than any other butane-propane dealer in the state in setting up a pension plan which offers the employe $200 a month beginning at the age of 65.

Mr. Kahl regularly pays employes bonuses for "meritorious achievement." Salesmen, of course, receive bonuses for extra selling effort, but other employes, in credit, maintenance and management divisions like-



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...or *red oxide?* HARRISBURG HAS BOTH.

USERS of our liquefied petroleum gas cylinders say they're "tough as a rhino." They know first-hand what we mean by the statement: *maximum* safety and quality with *minimum* practical tare weight.

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EVERY CYLINDER rigidly tested and inspected, including hydrostatic testing to 480 p.s.i. Made to *I.C.C. Specification 4BA-240* from high-tensile-strength alloy steel... 100 lb. capacity ...72 lbs. tare weight ... in domestic and export types... smooth-side construction without ridges or bulges for easy handling.

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Custom-Built Quality Products in Quantity

98 YEARS IN PENNSYLVANIA'S CAPITAL

Harrisburg 4, Pennsylvania

Mr. Kahl writes out a bonus check for one of his servicemen.

wise share in such rewards. In one way or another, Mr. Kahl manages to budget around $100 per year for each employe in "surprise bonuses," all of which build inter-employe goodwill solidly. Above that, he spends around $275 per year for every employe on the entertainment, interest-free loans, hospitalization, and "goodwill" of his helpers.

Elaborating upon the entire plan and details, as well, Mr. Kahl states:

"Early in October we had another company-family dinner at which time the newest serviceman received his 5-year Kahl service button and the bookkeeper received her 10-year diamond pin. The average length of employment is now eight years which is probably unique in the industry, and a record of which we are proud.

Engage in Sport Events

"We have had five golf tournaments so far this year, our Kahl Appliance Co. softball team won the City League championship, and six of us took in the Indianapolis 500-mile race.

"Our pension plan is aimed at every employe having $200 a month income at retirement and this is accomplished through the medium of insur-.nce. While the company contributes up to 50% of the cost of the insurance, we retain no control of the policy whatever—the employe has complete control and can keep it up himself should he ever leave our employ. We encourage home ownership and are aiding two employes at the present time in purchasing property.

Servicemen Attend Service Schools

"Our gas business has grown from zero to over 1200 customers in five years through giving them prompt, efficient service at all times. Our servicemen take in all the various service schools and training schools—the University of Minnesota LPG school being the latest.

"In other words, we feel it is good business for us and for our customer relations to keep the same group of employes year after year and to keep them happy through proper remuneration, pleasant company surroundings and activities, and help them grow into solid, substantial citizens in the community. Our whole thinking has been along this line, and it has certainly paid dividends."

Phillips Drilling Wells For Surplus LPG Storage

Storage of surplus plant products of LPG in underground reservoirs is being investigated by Phillips Petroleum Co. near Borger, Texas. Two shallow wells are being drilled to a depth of about 1500 ft. in Permian salt formation for future storage.

Instead of the usual method of injection of salt water through the tubing and producing LPG through the casing-tubing annulus, Phillips may use the bottom-hole pump method for pumping the propane.

Associations

Frank J. Zink is Appointed Managing Director of NBPA

Frank J. Zink, agricultural engineer and experienced national trade association official, has been named managing director of the National Butane-Propane Assn., succeeding E. E. Hadlick, resigned, who was executive vice president of the NBPA since its organization in 1945.

New headquarters have been established at 141 W. Jackson Blvd., Chicago, in Room 4300 of the Board of Trade Bldg.

The next meeting of the NBPA will be at the Hotel Jefferson, St. Louis, on Jan. 7.

GAMA

LOUIS RUTHENBERG

Taking office as president of the Gas Appliance Manufacturers Assn. at the Oct. 4 meeting of the directors was Louis Ruthenburg, chairman of the board, Servel, Inc. He replaced Frederic O. Hess, president of the Selas Corp. of America.

A. B. Ritzenthaler, Tappan Stove Co., became 1st vice president and J. F. Donnelly, A. O. Smith Corp., is now 2nd vice president.

Lyle C. Harvey, Affiliated Gas Equipment, Inc., held over as treasurer and H. Leigh Whitelaw remains as managing director and secretary.

All new officers were elected at GAMA's annual meeting held last April in Chicago.

NGAA

Meeting time of the NGAA Panhandle-Plains Regional session has been changed from Dec. 7 to Nov. 20, according to John Kindle, Dallas, program chairman.

The meeting place will still be at the Herring hotel in Amarillo. The committee stated that arrangements had been made with the hotel to move forward to the new date all room reservations made for the Dec. 7 meeting.

Carolinas

The annual joint convention of North and South Carolina Liquefied Petroleum Gas Assns., met in Myrtle Beach Sept. 14-15 at Ocean Forest hotel.

The association held a meeting of the board of directors of the two state groups Sept. 15. There were also joint meetings as well as separate meetings of the North Carolina and South Carolina groups.

For South Carolina, E. K. Butler, Jr., of Columbia, is president and M.

L. Bailey of Granite Quarry, N. C. is president of the North Carolina group.

Approximately 150 dealers, supply representatives and guests attended the meeting.

Georgia

Approximately 125 persons associated with the LP-Gas industry in Georgia attended a Sept. 29 meeting in Atlanta at the Biltmore hotel. Presiding at the meeting was Kingsley Weatherly, president of the Georgia LP-Gas Assn.

The program, according to T. G. Fields, district secretary of the Southeastern district of the LPGA, contained talks by Zack Cravey, Georgia's insurance commissioner, who discussed LP-Gas insurance; M. A. Ennis, spoke on the need for industry advertising and employe training; L. V. Johnson, director of the Southern Technical Institute, discussed the gas fuel technology course at his school.

Nevada

Elmo Whitmire, of Fallon Butane-Propane Co., Fallon, Nev., was elected president of the newly organized Nevada LP-Gas Assn. at the Sept. 23 meeting of the group in Reno.

Other officers include G. Gottschalk, Carson Nu-Gas Co., Carson City, vice president; and F. A. Martin, Ransome Co. of Nevada, Reno, secretary-treasurer.

Directors: C. Harper, Elko; K. Craig, Austin; and G. Myers, Lovelock.

New Mexico

Brad Watkins, of Roswell, was elected president of the New Mexico LP-Gas Assn. at the largest gathering of Southwestern LP-Gas dealers when they met Sept. 16-18 at the Hilton hotel in Albuquerque. Mr. Watkins succeeds J. A. Ikard, outgoing president.

"Every Member Get a Member" was the theme of the annual convention and trade show. A poster displaying "Saludos Amigos" in the hotel lobby set the pace for the program which was under the able direction of Convention Chairman R. C. Martin.

Association officers for New Mexico are (left to right): Brad Watkins, president; Ben Clark, secretary-treasurer, and M. E. Hutcherson, vice president.

As the initial speaker, L. L. Peters, of American Stove Co., forecast a profitable future for LP-Gas in the state. He said users had multiplied 10-fold between 1940 and 1950, from 5000 to 50,000, and estimated at least 12 more years of growth at approximately 4000 new users per year. He indicated New Mexico has more coal ranges per capita than any other state, presenting the major market outlet for these new users.

Floyd Selim, of Phillips Petroleum Co., presented charts and graphs showing advantages of LP-Gas as motor fuel for tractors and trucks. Underground storage in salt domes was detailed, as well as the need for

load-balancing outlets for propane and butane.

A film sponsored by the U.S. Board of Ships, "Chemistry of Fire," emphasized the extinguishment of liquid fires. J. B. Cooney, Assistant Attorney General of New Mexico, stressed the importance of dealer cooperation with the new members of the State Public Service Commission. He particularly asked that the industry work closely with the commission in the drafting of new rules and regulations.

M. E. Hutcherson, of Ft. Sumner, was elected vice president of the group and Ben Clark, of Clovis, was reelected secretary-treasurer.

James Crawford, district secretary of the LPGA in Denver, will continue to sponsor district meetings throughout the year.

Latest developments in the appliance and equipment field were attractively displayed by 21 distributors' booths. Entertainment and dancing, and a hospitable "Hasta La Vista" closed a successful convention.

W. A. NAUMER

GEO. R. KELLEY

North East District, LPGA

The annual meeting of the North East District of the Liquefied Petroleum Gas Assn. was held at Hotel Statler in New York, Oct. 11, with Lt. Gen. Robert L. Eichelberger delivering the principal address.

Presiding was Walter A. Naumer, Pyrofax Gas Co., and principal talks were delivered by Howard D. White, John W. Oyler, Lee A. Brand, E. Carl Sorby, George R. Kelley, John A. Ackley, and Roy R. Johnson.

F. W. Frost was chairman of the committee on arrangements.

North Dakota

A. T. Olson, secretary of the North Dakota LP-Gas Assn., has announced that the second annual meeting of the group will be held Nov. 13-14 in Bismarck, N. D.

The meeting place will be the Patterson hotel. President Addison Hedberg will preside at the meeting.

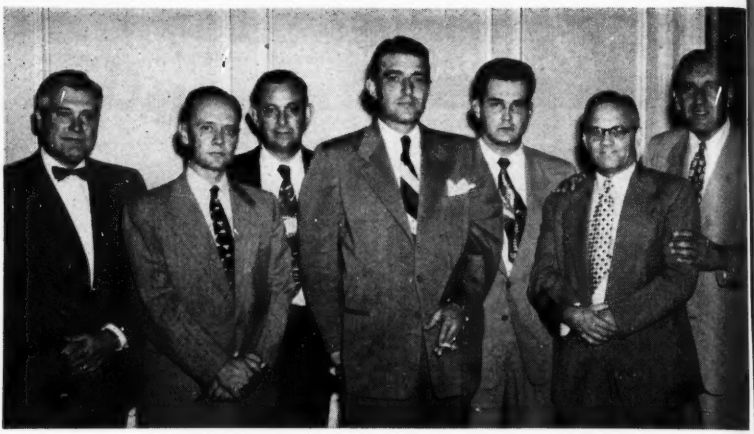
Pennsylvania

At the annual meeting of the Pennsylvania LP-Gas Assn., held Sept. 17 at the Penn Harris hotel in Harrisburg, the major part of the program was devoted to a discussion of the joint advertising promotion for central Pennsylvania.

The program, which will be sponsored by the United Gas Improvement Co., its affiliated gas utilities, suppliers, manufacturers, and LP-Gas dealers themselves, was outlined by Gordon Jones of UGI. It will consist of billboards, radio, television, and newspaper advertising, and direct mail to promote the sale of gas, whether it be bottled gas or utility gas.

New officers were elected at the one-day meeting. They are J. E. Shaffer, Atlantic States Gas Co., Lewistown, Pa., president; A. C. Horner, A. C. Horner, Inc., Harrisburg, Pa., vice president; James Hays, Town & Country Gas Service Div., Taneytown, Md., secretary.

Directors: Joseph Fletcher, Phila-



New officers and directors of the Pennsylvania LP-Gas Assn. (left to right): L. F. Finkler, director; Joseph Fletcher, director; A. C. Horner, vice president; J. E. Shaffer, president; James Hays, secretary-treasurer; Roy Johnson, director; and Thodore Kapnek, director.

delphia; L. F. Finkler, Williamsport, (Pa.); Roy Johnson, Liberty (N.Y.); Emerson Thomas, Westfield (N.J.); and Theodore Kapnek, Hammonton (N.J.).

Other speakers included Howard D. White, R. H. Mahnke, M. A. Ennis, and G. M. Rohde, Jr.

A friendship hour, dinner, and show followed the business sessions of the meeting.

Northeastern Pennsylvania

Dealers serving over 40,000 families in the northeastern section of Pennsylvania recently met and organized themselves as the Northeastern Pennsylvania Bottled Gas Dealers Assn. with James Monk of Wilkes Barre, president.

United effort to serve customers in the best possible way and to advertise this service is one of the main reasons for organizing. Standards will be set up for all LPG operations for all members to comply with. Group displays at various county fairs will make it possible for more LPG dealers to take part in such events.

Other officers and directors, in addition to Mr. Monk, include Harry Kern, Catawissa, secretary; Arthur Miller, West Pittston, vice president; Bill Cutten, Wyoming, treasurer. Abe Kaplan, Wilkes Barre, Ed Longenberger, Drums, and Gene Schlanger, Scranton, are directors.

Another Firm to Market LPG Lighter

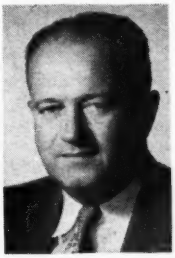
The National Butane Co., Inc., was organized recently to market butane cigarette lighters and like products.

Directors of the company, located at 130 W. 42nd St., New York City, are Ruth Horowitz, Cordelia Sebald, and Robert Yudin.

Re-Districting of State Groups Made by LPGA Board at Denver

A transaction of widest importance to the LP-Gas industry that developed out of the board of directors meeting of the Liquefied Petroleum Gas Assn. at Denver, Sept. 13-14, was the recommendation of the appliance specification committee which recommended the elimination of the present requirement for 100% safety pilot in ovens of CP ranges. Although

W. S. LANDER



H. C. TENBROOK

there was some division of opinion regarding this matter, even among committee members, the recommendation was approved by the board and committee chairman Doyle D. Buttolph was authorized to present the recommendation to the American Gas Assn. Approval Requirements Committee for their consideration.

The recommendation of the appliance specification committee reads specifically:

"That Paragraph 'c' of Section 9 of Part II of the American Standard Approval Requirements for Domestic Gas Ranges be revised as follows:

"An automatic pilot shall not pass gas except to its pilot burner or burners when in the closed position resulting from normal operation. The maximum gas passed to its pilot burner or burners shall not be in excess of 200 Btu during any one-hour period."

The board also decided to make several changes in the districting of some of the existing association districts. This was upon the recommendation of the constitution and by-laws committee, whose chairman is Lee Brand. The reconstructed districts will now be as follows:

District Groups

1. Montana, Washington, Oregon, Idaho.
2. California, Nevada, Arizona.
3. Utah, Wyoming, Colorado, New Mexico.
4. North Dakota, South Dakota, Minnesota, Iowa, Wisconsin.
5. Kansas, Oklahoma, Nebraska, Missouri.
6. Illinois, Michigan, Indiana, Ohio, Kentucky.
7. Texas, Arkansas, Louisiana, Mississippi, Tennessee.
8. Alabama, Georgia, Florida, South Carolina, North Carolina.
9. Virginia, West Virginia, Maryland, New Jersey, Delaware, Pennsylvania, New York.
10. Maine, Vermont, New Hampshire, Massachusetts, Rhode Island, Connecticut.
11. Eastern Canada.
12. Western Canada.
13. Mexico.

Among the many actions of the

board at what was an unusually busy meeting were the following:

A decision to limit the 1952 convention in Chicago to three days instead of the four days originally planned, upon the recommendation of convention committee chairman H. C. TenBrook. The dates will now be May 12-14, inclusive, and the place will be the Palmer House.

Frank Fetherston reported that the subject of cargo tank heaters is still under consideration with the Interstate Commerce Commission and that the ICC has effected a change in specifications on steel to be used on containers because of current steel shortages. He also stated that the Coast Guard regulations have been changed and a change made in the Canadian Marine Code that will permit limited transportation of LP-Gas on passenger vessels.

Chairman A. C. Ferrell, of the membership committee, reported that the association membership, including all classifications, now totals 1294. With additional state associations expected to affiliate with the LPGA, this membership figure will be considerably increased in the near future, it is expected.

Chairman W. H. Hoagland, of the safety committee, stated that the objectives of his committee for the coming year will be:

Safety Program Outlined

1. To make available to members safety inspection forms for bulk plants, tank trucks, etc., in order to standardize such procedures.

2. To arrange for a series of safety meetings on various phases of LPG operating activities.

3. To make available a safety contest for awards for the best safety records over a definite period.

4. To attempt to secure films to make available to industry members sound safety practices in the handling of liquefied petroleum gas.

5. The appointment of a new subcommittee to study the subject of making available to members a safety manual.

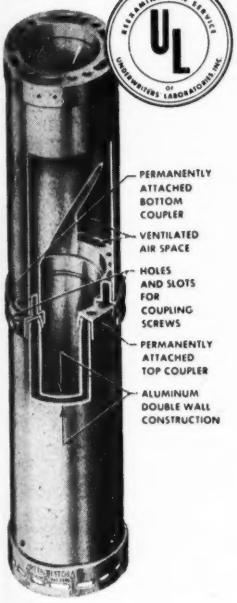
6. The preparation and distribution of posters and other material to promote safety among operators.

An appropriation was also made for the reprinting of a revision of the LPGA's "Recommended Good Practice Rules for Liquefied Petroleum Gas Piping and Appliance Installations in Buildings." Copies of this will be distributed free to members of the LPGA and sold at a nominal price to others to cover printing and handling costs.

Freight Rates Discussed

George W. Bach, transportation committee chairman, stated that "Effective Aug. 28, 1951, all interstate rail freight rates were again increased. This increase applies in lieu of the temporary increase which took effect April 4, 1951. These latter increases, which will be in the form of surcharges applied to the freight charges, will be 6% in Western and Southern territories, and 9% in Eastern territory, which is generally described as being east of the Mississippi and north of the Ohio and Potomac Rivers. In the case of combination rates, the factors will be increased separately. For example, on a shipment originating in Western territory destined to Eastern territory, if one factor lies entirely within Eastern territory, that factor will be increased 9%, whereas, the other factor will be increased 6%.

"The railroads have recently approved storage and transit arrangements on LP-Gas at several points where underground storage is contemplated. Under these arrangements, gas may be shipped to the storage



BE SURE OF SAFE VENTING WITH QC METALBESTOS

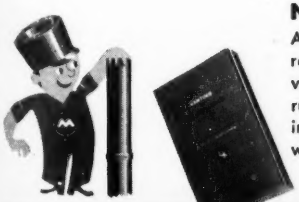
Improper venting of gas appliances always brings customer complaints and sometimes results in serious financial loss to contractors. Metalbestos' unique pipe-within-a-pipe construction assures safe, efficient venting. Precision made Quick-Couplings align pipe sections automatically and form a permanently gastight connection. Even when unskilled workers install foolproof Metalbestos, you know the job is right and will give years of trouble-free operation.

LOWER INSTALLATION COST

Made of corrosion-resistant, lightweight aluminum, Metalbestos is easy to handle, simple to install. Only 3 screws are needed to quickly connect pipe sections without using mastic, cement or banding material. No special tools are required. Adjustable elbows and other versatile fittings permit rapid assembly and eliminate expensive, time-consuming cutting and fitting.

NOW AVAILABLE!

A new manual, "Venting of Gas Appliances", is now ready for distribution. Published in the interests of better venting, this valuable booklet contains the important rules for venting gas appliances and other helpful information regarding good venting practices. Yours without charge — simply fill out coupon. No obligation.



METALBESTOS DIVISION
WILLIAM WALLACE COMPANY • BELMONT, CALIF.

METALBESTOS DIVISION *Department* M
WILLIAM WALLACE CO. • Belmont, California

Please send a copy of your new manual, "Venting of Gas Appliances."

NAME _____ TITLE _____

COMPANY _____

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point at the full rate to such storage point and then, at a later date, reshipped at the balance of the through rate from the original point of origin to the ultimate destination; plus a transit charge."

Frank Fetherston was appointed as the LPGA's representative on the American Standards Assn. committee.

After discussing the advisability of the tank manufacturers forming their own organization to present their problems to the authorities in Washington, in a statement presented by F. A. Henninger on behalf of the tank fabricators, the LPGA board then passed a resolution authorizing the establishment of a container section so that efforts could be made to increase association membership among tank manufacturers in order that a more formidable front could be presented to influence authorities in the association's effort to obtain larger steel allotments for the manufacture of containers.

New Committee Appointed

Upon the recommendation of C. J. McAllister, chairman of the special committee for promotion of the Gas Fuel Technology course at Southern Technical Institute, the board approved the establishment of a "Gas Fuel Technology Foundation" scholarship fund. The fund was authorized and President W. S. Lander was instructed to appoint a special association committee to appoint and administer this fund.

The establishment of a new temporary district office located in Chicago was authorized to serve the presently integrated states of Illinois, Iowa, Michigan, and Wisconsin. Another district office will be established for the states of Maryland, Pennsylvania, New York, and Virginia at such time as those states affiliate with the LPGA, the board promised E. O. N. Williams, who represented the named states. Pennsylvania has already affiliated with LPGA.

F. N. Mabee, first vice president of the LPGA and a Denver distributor, was host to the board of directors at its September meeting. The next meeting is scheduled for Dec. 6-7 at the Sheraton hotel in St. Louis.

CALENDAR

Nov. 5—Minnesota Petroleum Gas Assn. Curtis Hotel. Minneapolis.

Nov. 5-8—American Petroleum Institute. Annual Meeting. The Stevens. Chicago.

Nov. 12 — Oklahoma LP-Gas Assn. Annual Meeting. Skirvin Hotel. Oklahoma City.

Nov. 13-14 — North Dakota LP-Gas Assn. Patterson Hotel. Bismarck.

Nov. 19-20—Montana LP-Gas Assn. Hotel Finlen, Butte.

Nov. 20—NGAA Panhandle-Plains Regional Meeting. Herring Hotel. Amarillo, Texas.

Dec. 6-7—LPGA Board of Directors. Sheraton Hotel, St. Louis, Mo.

Dec. 7-8—Wyoming LP-Gas Assn. Annual Meeting. Townsend Hotel. Casper.

1952

Jan. 7—National Butane-Propane Assn. Hotel Jefferson. St. Louis.

Feb. 25-26—Indiana LP-Gas Assn. Hotel Claypool. Indianapolis.

Feb. 25-26—LPGA Board of Directors. Del Prado Hotel. Mexico City, Mexico.

Mar. 24-26—LPGA Southeastern District Convention. George Washington Hotel. Jacksonville, Fla.

April 13-15—Mississippi LP-Gas Assn. Annual Convention. Edgewater Gulf Hotel. Edgewater Park.

April 30-May 2—Natural Gasoline Assn. of America. Rice Hotel. Houston, Texas.

May 12-14—LPGA Annual Convention & Trade Show. Palmer House. Chicago.

May 21-23—Gas Appliance Manufacturers Assn. Annual Meeting. The Broadmoor. Colorado Springs, Colo.

June 18-20—Texas Butane Dealers Assn. Baker & Adolphus Hotels. Dallas.

Master Tank & Welding Observed 12th Anniversary

Twelve years ago, in the back end of a small 2-car garage in Dallas, Texas, Sam Weempe started a one-man welding shop. He observed his twelfth anniversary on Nov. 1, with his small shop grown into a full size, million-dollar industrial plant covering 36 acres of ground, and over 200 men are on the payroll.

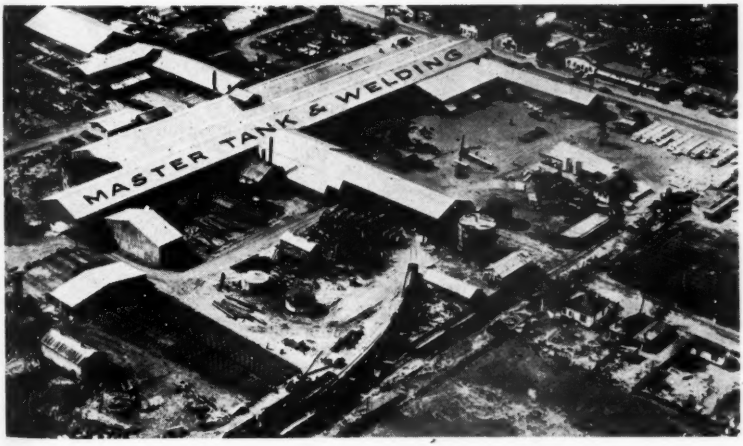
Master's production capacity is over 500 tanks a day. The standard items include fuel tanks ranging from 20 gals. to 1000 gals., domestic tanks from 150 gals. to 1000 gals., and cylinders from 20 lbs. to 100 lbs. Special sizes will be built on customer's order. The largest tank constructed this year had a 30,000-gal. capacity and required three railroad flat cars to haul it to its destination.

In the line pipe division Master Tank and Welding is capable of fabricating 2 miles of 30" pipe line pipe a day. Hundreds of other items are manufactured, some in the petroleum industry and others for different markets. W. J. Guidry is southern salesman for the company and A. V. McMurry is the northern sales representative.

E. W. Heilmann Will Direct Consumer Durable Goods Div.

Ernest W. Heilmann has been designated Acting Director of the Consumer Durable Goods Division, the Office of Price Stabilization announced Oct. 2. The appointment is an interim one until a director is named for the division.

Mr. Heilmann was appointed as a consultant to the Division in February and has served on an intermittent basis since then. For a time he filled the post of Acting Assistant Director.



Present plant of Master Tank & Welding Co., Dallas.

NEW HOMES . . .

offer growing market for package sales

By ALBERT S. KESHEN

THAT newly constructed small homes offer a dealer a splendid opportunity to sell a packaged unit of range, heating equipment, and refrigerator, together with the lease of a metered LPG tank, has been demonstrated in recent months by the Ace Bottled Gas Co., of Toms River, N. J.

That section of south Jersey which is in the heart of the pine tree belt and largely devoted to agricultural and resort activities, has been experiencing a sharp upgrowth in bungalow and small-home construction. The impetus has been due to increased defense activities as the famous Lakehurst naval station is close by and several factories have sprung up nearby.

The company's practice has been to contact the home owners direct, instead of the builders or architects. Leads are developed by a salesman who covers a 35-mile territory daily, or by the dealer, Alvin E. Clayton, who keeps close tab on residential developments. When these men spot a house in the early stages of construction, they contact the owner, who is usually about the premises, and try to sell him on bottled gas service and the appliances that are used with it, all obtainable from one source, which saves time and effort in shopping around.

Alvin E. Clayton makes water heater sale to a feminine customer.

Since the homeowner is concerned at the moment with his building problems he is in a mood to listen to advice on the installation of a furnace, an automatic water heater and a gas range. Usually he can be readily convinced that by using propane in all of his appliances, he gets the following benefits:

1. The gas rate is highly favorable as compared to the cost of fuel oil. In most cases he will even be content to pay a little more for gas than oil because gas is a cleaner operation and there is no trouble in lighting.

2. Through the use of a metered tank he can easily check on the rate of his consumption and his reserve supply.

3. He has to deal with but one fuel supplier, reducing payment problems and being assured of better service.

One construction provision is made mandatory by Ace Bottled Gas before it will make a heating installation: The ceiling must be insulated with mineral wool, preferably up to the 4-in. thickness. If the owner can afford it, wall insulation with the same material is recommended, but not required.

The new homeowner is shown that insulation which prevents escaping

heat will more than repay itself in the long run as it serves as an invisible blanket over the house, retaining warmth and requiring less fuel. At the same time the insulation keeps the premises that much cooler in the summer.

Impressed with this presentation, the new customer can be signed up immediately or taken to Mr. Clayton's attractive showroom, where a selection of appliances can be made. The display room and offices were constructed in 1947 on the highway a few miles from the town's business center. This one-story red brick structure with knotty pine woodwork and plenty of window area, contains the various types of appliances available in a bright and cheerful environment which is conducive to buying.

"We have been urging our accounts to use metered tanks in the past few months so that now our gas business is about equally divided between unmetered and metered installations," said Mr. Clayton. "The main advantage is that meters eliminate most customer complaints. Under straight rentals of unmetered tanks, if a user forgets to order and his tank runs out, he will take out his neglect on us; but use of meters assures that the tank will be filled regularly when our man comes around on his regular schedule, with no extra charge for this servicing."

In line with a strict supervisory policy to insure that their accounts are getting the most for their money, the company insists that any gas furnace sold to one of its accounts must have the approval of the office before a tank will be installed to fuel it. No particular brands are pushed, but the furnace must be properly sized for service it is expected to perform.

For installation work, one truck is constantly on the job besides the five fuel delivery trucks. A 30,000-gal. storage tank is in the spacious yard behind the sales and office building and alongside a siding of the Jersey Central line.

The company which was established in 1936 has grown until now it has eight employes.

"Reverse Flow" Heating Plan Developed by Colorado Dealer

Frank Semerad, Ft. Collins, Colo., dealer, has just announced the successful development of a revolutionary installation technique in warm air heating which utilizes a "reverse flow" principle in which return air is received by cold air grilles placed near the ceiling. Warm air registers, however, still occupy conventional locations. The Semerad method eliminates air turbulence and "layer-caking" of air responsible for the floor drafts.

The "reverse flow" system has been thoroughly tested with various Payne furnace units in more than 40 homes during the past two years, homes ranging from 750 to 3400 square feet. The tests have proved that temperature variance is virtually eliminated with "reverse flow" and that operating costs have been reduced an average of 20%. It was found, too, that the cold air returns, at or near ceiling height, did not accumulate dirt.

Green's Fuel Branch Has New Sales Manager

The Gainsville, Fla., branch of Green's Fuel, Inc., has named Bob Burgwald sales manager, according to C. H. Janes, local store manager.

Mr. Burgwald has had 10 years' experience in the appliance field, acting principally as an advisor in the selection of appliances for particular needs.

Products...

Warm Air Furnace

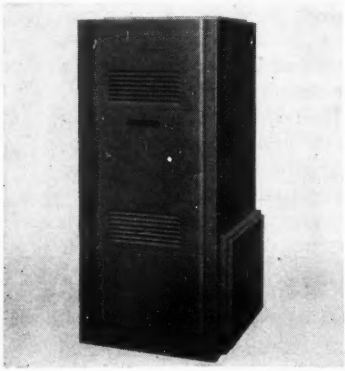
COLEMAN CO., INC.
Wichita 1, Kan.

Model: No. 184.

Description: This is one of three additions to the company's line of gas-fired, forced warm air furnaces for use with "Blend-Air" or conventional duct systems.

Bearing AGA approval, the furnaces are rated at 125,000, 100,000, and 75,000 Btu input. Pictured is the largest of the three new models. It has a dual "Even-Flo" blower unit operating on direct drive from a single 1/3-hp. motor. Dimensions: width, 24¾ in.; depth, 35¼ in.; height, 58⅝ in. Other models have slightly less depth.

Features include ribbon-type burners with special heat resistant flame spreaders and electronically welded steel combustion chambers. Compact design of casing facilitates installation in utility rooms, closets, and alcoves.



Conversion Kit

J & S CARBURETOR CO.
2634 N. Beckley, Dallas.

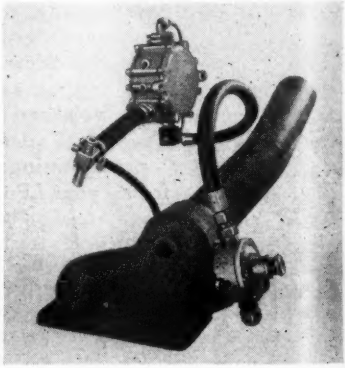
Model: John Deere Conversion Kit.

Description: A special cylinder block water outlet which is completely interchangeable with the standard water outlet on the John Deere Model "A" tractor is featured.

This special outlet holds a J & S tubular vaporizer in the outlet water stream without restricting the engine's normal water circulation. Its use is said to eliminate the need of any type auxiliary water circulation system to supply the LPG vaporizer on this model of tractor, which does not use a water pump.

Other parts supplied in the kit include a liquid filter, J & S balanced regulator, spud-in nipple, vapor hoses, etc., necessary for the complete installation without changing the original carburetor.

A similar kit is available for the John Deere Model "G" tractor.



Heat Loss Calculator

CLIMATEMAKER HEAT LOSS CALCULATOR CO.
Dept. 644, Box 378, Bloomington, Ill.

Model: Climatemaker.

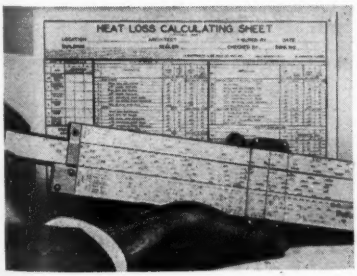
Application: Designed especially for dealers in residential heating equipment.

Description: The answers obtainable with this heat loss calculator include Btu loss for each room, plus total loss from house; cubic-foot-per-minute requirements for forced warm air, gravity 200° and gravity 175° heating units; square feet of steam or hot water radiation required to heat each room.

The calculator will also determine the pipe area; pipe, stack, and blower sizes for forced warm air heating systems; pipe area, pipe and stack sizes for 1st, 2nd, and 3rd floor when using gravity 200° and 175° heating systems.

Line loss, coal and oil furnace and gas burner sizes, and cost of heating per season information are also available.

The Climatemaker heat loss calculator is quick and easy to operate and comes equipped with complete operating instructions.



Changeover Regulator

FISHER GOVERNOR CO.
Marshalltown, Iowa.

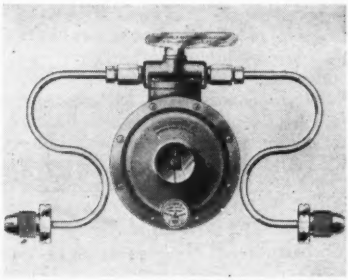
Model: Manimatic Type 924.

Description: As a successor to the Fisher Type 940 manual changeover regulator, Type 924, also of manual operation, features greater compactness, increased sturdiness and lower cost.

With Type 922 as its basic regulator, the Manimatic features greater interchangeability of parts. Changeover manifold Type 1880 is used in conjunction with Type 924 but is also available as a separate unit. Conversion is simple—merely requires removal of the present flanged inlet fitting and attachment of the 1880.

Manimatic Type 924, suitable for cooking, refrigeration, water heating, clothes drying, and incineration jobs, has a capacity of over 250,000 Btu per hour.

Other features include inverted flare connections for full capacity flow; POL inlet connections; ½-in. female pipe thread outlet for full size appliance piping; two ¼-in. inverted flare by POL 20-in. pigtails.



Home-Heating Boiler

A. O. SMITH CORP.
Milwaukee 1, Wis.

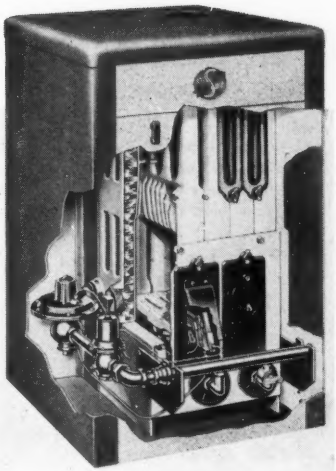
Model: Burkay Home Heating Boiler.

Description: The new unit, of cast-iron sectional construction, embodies many improvements.

It is available for both gravity and forced hot water heating systems. The unit is planned particularly for small and medium sized homes using modern convector and radiant panel heating.

In appearance, the new heating unit comes in two-toned gray hammerloid finish.

The boiler is available for use with all types of gas.



Domestic Range

AMERICAN STOVE CO.
1641 S. Kingshighway Blvd.,
St. Louis 10, Mo.

MODEL: 48L.

Description: This is a new addition to the Magic Chef line for fall and meets consumer demand for a moderately priced 39-in. range.

The range includes "Red Wheel" oven heat regulator, one-piece top burners, and smokeless swing-out broiler with toe control.

Other features include a 16-in. oven, extra large storage compartment, divided cooking top with center work space, and electric light and spring-wound timer.

The range is insulated throughout with fiberglas and is finished in porcelain enamel.

PRODUCTS

Tachometer Vacuum Gauge

QUALITY ELECTRIC CO.
1026 S. Grand, Los Angeles.

Model: Rev-O-Gauge.

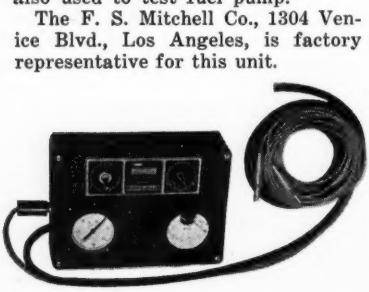
Application: Designed to use on engines with battery ignition, utilizing primary ignition circuit, it measures directly the revolutions per minute of engine or crankshaft speed. The vacuum and compound gauges are of the Bourdon tube type.

Description: The Rev-O-Gauge is available in two models. Model R-I is a combined tachometer and vacuum gauge. Model R-II is a combined tachometer and compound (vacuum and pressure) gauge.

The tachometer is used for all adjustments which must be made at a specific engine speed: precision adjustment of ignition timing, carburetor adjustments, checking air cleaners, setting engine rpm governors, testing for cylinder balance, checking speedometer, etc.

The Rev-O-Gauge vacuum gauge will indicate the following troubles: sticky valves, valve or ring leakage, faulty carburetor adjustment, choked muffler or exhaust pipe, improper ignition timing, intake manifold air leak. The Model R-II is also used to test fuel pump.

The F. S. Mitchell Co., 1304 Venice Blvd., Los Angeles, is factory representative for this unit.



Stock Tank Heater

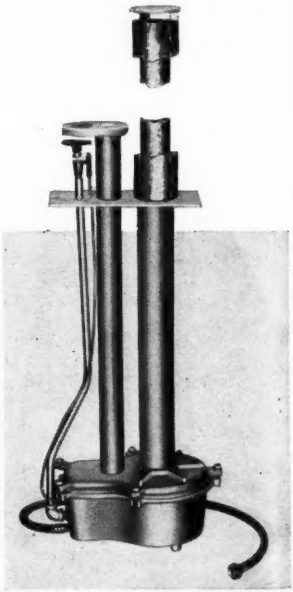
NATIONAL IDEAL CO.
Toledo, Ohio.

Model: Premier Heater

Description: A burner for mild weather and one for severe weather is a gas-saving feature of this new gas-burning stock tank heater.

Elimination of down draft and condensation trouble is claimed for the new unit. It will keep an 8-ft. tank ice-free in sub-zero weather. It also operates with larger, protected tanks.

The stock tank heater, burning liquefied petroleum gas, is of cast-



The National LP-GAS Promotional Program is *all yours!* It's designed and built to help *you* increase sales, to buck *your* competition, to build *your* stature as the LP-GAS dealer in *your* community.

The more active a part you play in it, the more you'll get out of it! The sooner you join up . . . and get on the LP-GAS promotional team . . . the sooner you'll cash in on *more* of the tremendous LP-GAS potential in your area.

Just look at this line-up of promotional helps:

312 Million Advertising Messages already delivered through regional and national magazines. More coming, too.

Tie-in material you can use! Ad mats and mailing folders at 20% discount when you join up. Radio scripts and press releases free.

A steady stream of news stories and articles to magazines, newspapers and radio stations.

Employee training! Tested ideas and educational material to improve your business . . . soon to be available.

The promotional program is working. It's a success! It'll work for you, too. The cost is small; the benefits are big. Send us a postcard today. Just say, "Count me in!"

Program co-sponsored by: Gas Appliance Manufacturers Association, Liquefied Petroleum Gas Association, National Butane-Propane Association, Natural Gasoline Association of America.

You can be proud of this emblem, too!

NATIONAL COMMITTEE FOR LP-GAS PROMOTION

Dept. BPN, 11 South La Salle Street, Chicago 3, Illinois

iron and galvanized steel construction. The explosion-proof heater fits any tank deeper than 10 in. The lighter is furnished with the heater.

Product Information

The **Seidelhuber Iron & Bronze Works, Inc.**, Seattle, Wash., recently introduced a new line of automatic storage gas water heaters, consisting of a full and complete range of sizes.

The company's new plant at 3693 E. Marginal Way, will house the production facilities. Featured in the manufacturing process is the use of 3/16 boiler plate and magnesium anodic rods in the construction of the storage tank. The Grayson "Unitrol" control will be used and burners will be one-piece cast-iron banjo type designed for maximum efficiency.

All water heaters are AGA-approved for use with LP-Gas, natural and manufactured gases.

The **Highside Chemicals Co.** has produced a new joint sealer composed of a polyhydroxylated plastic base for sealing LP-Gas joints. According to

the manufacturer, the joint sealer has shown definite resistance to the actions of LP-Gas.

"Leak Lock," as the sealer is known, is available in 1 1/3 oz. tubes and pint cans. For additional information address the company at 10 Colfax Ave., Clifton, N. J.

Eclipse Catalog

A comprehensive bulletin designed to show the wide variety of company products has just been issued by the Eclipse Fuel Engineering Co. It illustrates and describes the complete line of McKee-Eclipse burners, mixers, valves and blowers used in gas combustion for industrial purposes. Also discussed are gas and oil-fired steam boilers and furnaces for the process industries.

The catalog is available from Eclipse at 1191 Buchanan St., Rockford, Ill.

Phillips Wins Highest Chemical Engineering Award

The 1951 award for chemical engineering achievement, highest honor in its field, has been won by Phillips Petroleum Co., Bartlesville, Okla. The announcement was made Oct. 12 by "Chemical Engineering," the magazine which sponsored this award to the company making the most important chemical engineering contribution since January 1948.

Work in developing high abrasion carbon black, and the company's major contributions to the success of cold rubber, vitally inter-related to the welfare and defense of the United States, won the coveted award for Phillips. Together they have tipped the balance from natural to synthetic rubber for tire treads, thus making the United States more nearly self-sufficient in rubber, contributing to the nation's defense and insuring low-cost transportation.

Formal presentation of the award will be made on Nov. 28 in New York during the biennial exposition of chemical industries by Alfred H. White, University of Michigan.

K. S. Adams, chairman of Phillips, will accept the award for his company.

Snow Plow Powered By Butane

LAST winter when many South Dakota state and county highways were blocked with snow, 38 miles of township road in Orland township, Lake county, were kept snow-free by Roy Adams operating an 8-ft., "V"-type plow pulled by his propane-fueled tractor.

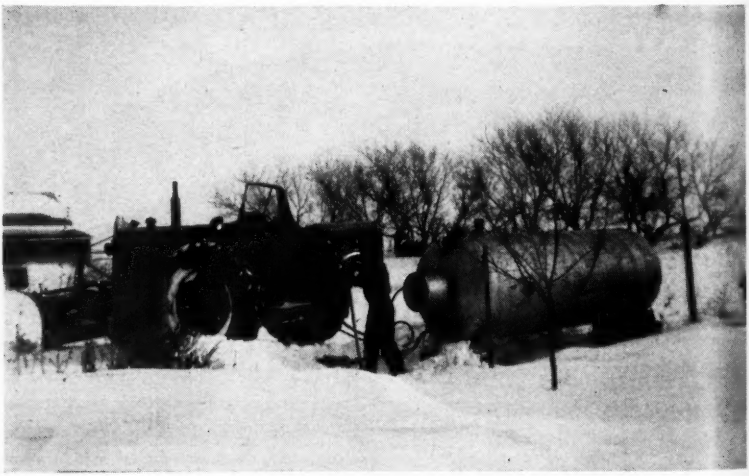
Mr. Adams has ben operating this Minneapolis-Moline Model "U" propane tractor since 1949. Recently, he plowed 400 acres of sod (land which had been in pasture for the past 18 years) with a 4-bottom, 14-inch plow. Fuel cost of the operation was 20 cents per acre.

The tractor now has over 5000 hours of work on it and has burned slightly over 7500 gals. of propane. In addition to farming his own land, Mr. Adams custom-farms 1150 acres of corn for his neighbors.

In the snow-plowing operation, Mr. Adams has encountered no starting difficulties, except when the temperature remained below zero for long periods. His tractor uses a pan heater for easier starting during the road-clearing periods.

In filling operations on the Adams farm, a Krug hand pump, manufactured by the D. H. Krug Co., Madison, S. D., is used to transfer fuel from the 1000-gal. storage tank to the tractor fuel tank.

No fuel change is contemplated by Roy Adams—the only change he would make would be to purchase a new LP-Gas-operated tractor.



Roy Adams filling his LPG "snow-plow tractor" from storage with Krug hand pump for clearing South Dakota roads in winter.

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Our Credit Plans Cover Four Basic Problems

RETAIL INSTALLMENT FINANCING of sales to gas consumers. In one package, LPG Credit Corporation will finance the appliances, the lease fee (when container is leased) or the sale price of the complete installation (when sold outright) and the initial sale of gas for new installations.

FLOOR PLAN for financing inventories of appliances and containers which are purchased by the dealer for resale to customers.

FINANCING OF CYLINDERS AND TANKS for dealers leasing systems to retail customers.

FINANCING OF BULK STORAGE TANKS AND DELIVERY EQUIPMENT.

Sales Promotion

As part of its services, LPG Credit Corporation offers a merchandising policy and complete sales promotion program as effective sales tools, including showroom display material, newspaper ad mats, radio spot announcements and direct mail pieces.

Inquiry on your company letterhead is invited.

LPG CREDIT CORPORATION

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Ferrell Butane Co. Opens Savannah, Mo., Bulk Plant

The A. C. Ferrell Butane Gas Co., Atchison, Kan., has opened a new branch operation in Savannah, Mo.

A. C. FERRELL

A new 30,000-gallon propane tank has been installed at the Savannah location, which is on U.S. 71 at the north edge of the city.

Mr. Ferrell has a 30,000-gallon storage tank for propane and a 30,000-gallon tank for butane in East Atchison. The Savannah addition will make his total storage capacity 90,000 gallons. It will provide the only bulk storage available in Savannah.

Mr. Ferrell has also started construction on a modernistic one-story stucco cement-block office building and display room, 30 x 40 feet, at the Savannah site. The structure will have a total of 50 feet of floor-to-ceiling window area. Red McIntyre, St. Joseph, Mo., is manager of the Savannah store, and Howard White, of Savannah, is the outdoor salesman. This store opened for business in September.

The company operates three bulk delivery trucks out of Atchison, and one out of Savannah. Also three pick-up trucks and two cars operate out of Atchison in a service capacity. A merchandise trailer is equipped with a full kitchen for display at county fairs and farm meetings. Charles Lockart and Bob Reed are the two outside salesmen in Atchison.

Mr. Ferrell, who started business in Atchison in 1938, currently is president of the Kansas Liquefied Petroleum Gas Assn. and is a director on the national LPGA, as well as being chairman of the membership committee of the latter organization.

H. Patrick Warren Establishes Dallas Carburetion Service

A. A. Butane Carburetor Service has been formed by H. Patrick Warren, Dallas, to specialize in the installation and servicing of all types of butane and propane carburetion. Headquarters of the company are located at 2640 North Beckley, Dallas. A branch of the company is also maintained at Fort Worth with J. C. Allen as manager. Twenty-four hour service is maintained at the Dallas location of the company. F. E. Hahnel is comptroller.

Mr. Warren has been associated with the butane industry for the past four years. He is a graduate in mechanical engineering of Texas A& M College. His experience with LP-Gas carburetion dates back to 1935.

D. Schmidt Named Engineer For J. & S. Carburetor Co.

S. P. Jones, of J. & S. Carburetor Co., Dallas, has announced that David Schmidt has joined the company in the capacity of automotive engineer, specializing in the field installation and operation of equipment and in the design and development of new equipment.

Before joining J. & S., Mr. Schmidt spent 10 years working in automotive laboratories in Michigan. He is an automotive engineering graduate and prepared and edited the LP-Gas Motor Fuel Manual recently issued by J. & S. Carburetor. He will make his headquarters at the Dallas office of the company.

An LPG-powered tractor breaking sod with a 4-bottom, 14-in. plow on the prairies of South Dakota. (See P. 122 for story.)

Savings in Fuel Will Repay Bus Investment in 7 Years

By CARL ABELL

"HOT DAWG!" said the driver of the big silver bus, as it rolled over the crest of the Barham Blvd. hill on its way from the Warner Bros.-First National Studio to the Cahuenga Pass Freeway in the northern limits of Hollywood, Calif.

"What are you 'hot dawging' about?" he was asked.

"This propane-fired bus sure takes these hills," he replied. "I've been waiting for months to get one of these. The drivers call 'em 'jet jobs'. Couldn't make it until the company got enough of 'em to get down to my position on the seniority list. That happened today. We used to have to go down in gears and hold up all the traffic on this hill. Not any more! There's no more stinkum in the exhaust, either! The smog control boys ought to like this."

This story is about the Asbury Transit System of Los Angeles and Glendale, which bought six of the first propane powered buses built by Twin Coach Co. 16 months ago. But this was one of the older jobs, which had been in service on this line for a number of years and converted to LPG by the transit company. Evidently something was going on at the big bus shop in Glendale. It was worth looking into. So Glen Stewart, superintendent of maintenance, was questioned.

"The propane buses are doing all right," Glen said. "In fact, the six new jobs have done so well that we are converting 20 of our old ones, and have ordered 10 additional, new, 54-passenger jobs. We need the capacity on some of the heavy traffic lines. You know, people seem to like to ride in these new buses. They keep up with the automobile traffic b e t t e r, and there's no halitosis of the exhaust. We haven't had a complaint of exhaust fumes on those buses since we started running them, more than a year ago."

"How about maintenance experience?" he was asked.

"Pretty good," he replied. "We had some problems on the start. You always do with any new development. We burned some intake valves when they were new. They would last about 20,000 miles. We

Asbury Intercity System Sold on Propane

cured that the same way we had cured the same trouble in gasoline engines. Put in better valves. I understand that the factory has done the same thing in production now.

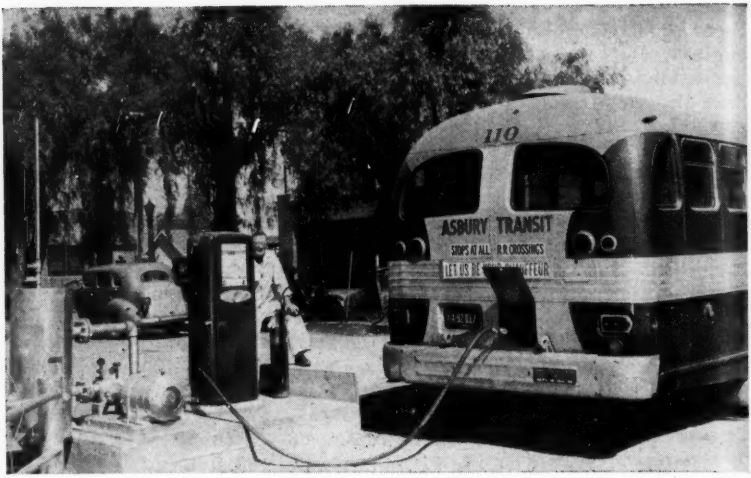
"The only valves we have had to touch since the change were in an engine that ran out of water. The engine was in the same condition it would have been on any other fuel—bad. But you can't blame that on propane.

"We also had some starting trouble, but we got that ironed out. After the mechanical part of the starting mechanism was under control, we still had to train the drivers away from their old habits. If you try to start a propane engine like you start a gasoline engine, you choke it to death.

"The six factory-built propane jobs have now gone an average of just about 100,000 miles each. The only one that has had the bearings examined was the one that ran out of water. The bearings were good, and the crankshaft had less than .0005 in. of wear. And the crankcase was clean. The engines run a lot more miles on a gallon of oil. They do right well on fuel, also. We get about 3½ miles per gallon on our most congested route, which is not much different than we formerly got with smaller buses burning gasoline. And propane only costs us half as much per gallon as gasoline."

A little quick figuring showed the buses were averaging 220 miles per day, and burning 63 gallons of propane. Nice little sale for any propane supplier! And the saving in fuel cost, alone, had more than paid for one of the six buses. That's something! If the fuel price stays comparable, all six will be paid out from fuel savings in ap-

LPG-burning passenger bus of Asbury line on a regular intercity run between San Fernando and Los Angeles.



Filling standard bus with fuel for daily run. Parkhill-Wade dispenser and Smith Precision pump. L. P. Gurley is at the controls.

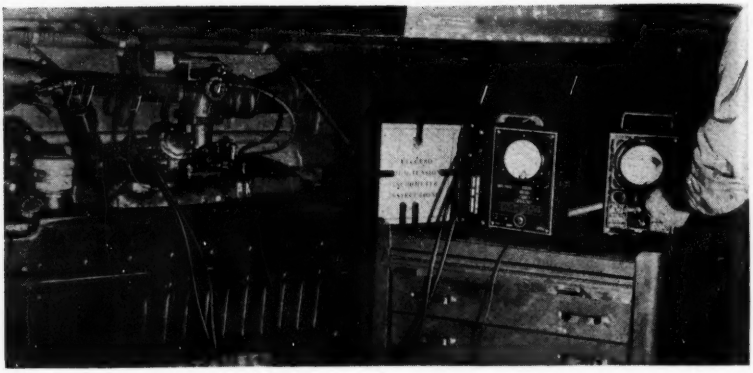
proximately seven years. In addition to this, there is a saving in maintenance cost.

"Now you see why we are starting to convert the older buses," Glen added. "We are operating 90 vehicles on our routes connecting Los Angeles and San Fernando, Pasadena and Hollywood, Hollywood and Culver City, and Hollywood and the principal towns in the San Fernando valley. The first jobs to be converted will be 10 Twins. We are putting in the factory conversions, including 10:1 compression ratio and Ensign carburetion. We will also change 10 Macks right away. We will not be able to go quite that high in compression, but the percentage gain in power will be almost the same, because the original ratio of the Mack was what you might call conservative."

"How much gain in power are you actually getting?" was the next question.

Performance Too Good To Be True

Stewart smiled. "We measured it on a chassis dynamometer when we converted the first bus. The figures look too good to be true, and I'd rather not quote them until we test some more engines. It must be enough to notice, because the drivers fight to get them. You know how drivers are. Nothing hurts them worse than to be pulling away from a stop light and have something overtake them. These propane jobs keep up with



Instruments are used in regular, periodic checkup of carburetor adjustments.

street traffic better than anything else we ever operated."

"Is fueling the buses any problem?"

Keep Ample Fuel Reserve

"None whatever. We have our own storage tanks and dispensers here at the Glendale shop, and at the San Fernando terminal. There are two 12,500-gallon underground tanks and metered Parkhill-Wade pumps at both places. That gives us net storage capacity of at least 10,000 gallons in each tank. When we want fuel, we telephone, and get 7000 gallons by truck and trailer. We have a cushion of several days supply, so we never run out.

"Filling the bus tanks is as easy as filling gasoline tanks. We use the Parkhill-Wade special bus tanks, with internal outage tanks so we can connect the hose and run the pump until the fuel stops flowing. It's quick and fool-proof, and we never lose more than a couple of ounces when the hose is disconnected. That's the only fuel loss we have. In operating gasoline buses we have fuel evaporating from storage and bus tanks most of the time."

One of the drivers came into the maintenance office, and stood waiting, his weight shifting slowly from one foot to the other.

Drivers Crave LPG Jobs

"You don't have to ask," said Glen. "Your turn comes up when we get two more engines converted. That'll be about the end of next week. And when you get it, treat it like you would a new wife for a few days, until you get it broken in."

"Yessir. And thank you, Mr. Stewart," the driver said, as he rushed out the door.

Garretson Carburetor System Will Have Wide Distribution

Si G. Darling, Pratt, Kan., national sales agent for the Garretson LP-Gas carburetion system, announced recently the addition of several new Garretson distributors. These include Liquefied Gas Corp., Boise, Idaho; Tilden Engineering Co., Fresno, Calif.; Universal Corp., Columbia, S. C.; Parlett Gas Co., Waldorf, Md.; Gas Distributors, Inc., Columbus, Ga.; and the Colorado Natural Gas and Fuel Co., Denver.

T. E. COOLEY

O. L. Garretson, designer of the equipment, has also established a new firm known as Garretson Carburetion of Texas, in Lubbock.

Mr. Darling stated that equipment in the Garretson line is now available for any spark ignition engine; tractor, truck, bus, or automobile.

Meanwhile, W. J. Montgomery, sales manager, Beals Advertising Co., Oklahoma City, the firm which handles all Garretson advertising and promotion, announced the appointment of Theron E. Cooley as Beals' special field representative for Garretson system promotions.

Mr. Cooley's primary activity will be devoted to working with Garretson system distributors in assisting dealers at the retail level to do a sound job of advertising, promoting, and selling Garretson LP-Gas carburetion to consumers.

Because of the tremendous increase in LP-Gas carburetion activity in the industry, it is expected that unit sales next year will be double 1950.

Engine Failed— Not Propane's Fault

THIS past fall we installed propane gas on our 351 Series 1949 GMC truck. We installed a complete LP-Gas carburetion system, but did not change the head or manifold system. It has operated perfectly and has never used any oil or caused any trouble. We have it pulling a 28-foot trailer loaded with 10 tons of soybeans or cottonseed, on 50-mile hauls over flat country.

Last week we sent it to St. Louis for a load of feed, and in a 2-mile running distance it began to knock terribly. We checked the oil and the temperatures, and both were all right. We pulled into a garage and tore it down, and found all of the main and rod bearings out and the crankshaft ruined. The truck had 10,300 miles on it. The mechanic checked the oil pump, and the oil, and found nothing wrong. He said he knew of nothing that could have caused it.

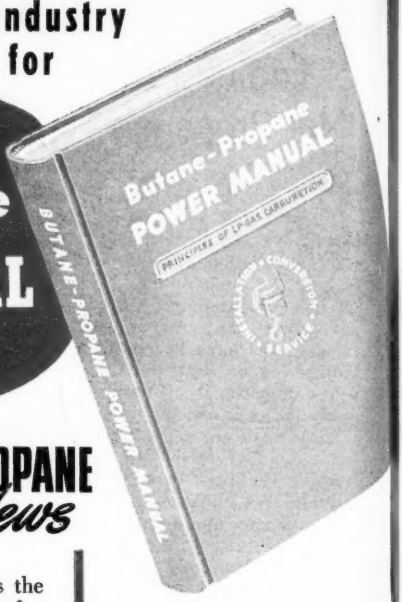
Propane—Mountain Fuel?

Our local GMC dealer reported this situation to the factory representative, who told him that the truck would not hold up on propane, which he claimed is strictly a mountain fuel. Our elevation here is about 300 feet. Our supplier of propane operates about 50 trucks of various sizes on propane, and he has never had any trouble of this sort. As a matter of fact, by using propane they have cut their repair bills considerably. Please advise us if the use of propane could have caused this trouble, and if so, why?

Will you also please advise how much we should have milled off the head for the proper compression ra-

The Book an entire industry has been waiting for

Butane-Propane POWER MANUAL



Published by **BUTANE-PROPANE** *News*

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About the Author . . . Carl Abell is nationally known as a technical lecturer and writer on automotive subjects. A member of the S.A.E. for over 20 years, he has contributed many of the articles published in Butane-Propane News on LP-Gas engines.

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tio for propane, and where we can get a cold manifold for this engine.

W.H.H.

Missouri.

Answer:

That factory man does not have much faith in his company's trucks. He should check up with the Hertz Truck Lease Service, of Los Angeles. For the past several years this company has been operating a fleet of between 50 and 60 GMC trucks on LP-Gas, and they state that the use of this fuel has enabled them to prolong the mileage between major engine overhauls by four times. (See BUTANE-PROPANE *News*, March, 1949.)

Pressure Not Increased

There is nothing in propane which would cause bearing failures, otherwise you local dealer would have experienced them in his fleet. Since you did not raise the horsepower by raising the compression, you have not increased the pressure on the bearings—actually the change should have reduced bearing pressures slightly, unless the ignition was timed considerably too early, and you would surely have detected this in the operation of the engine, as it would have idled very badly and would have had a tendency to die when being clutched in.

The only probable cause which we can see for this wholesale bearing failure would be a plugged oil line between the oil pump and the gallery which distributes the oil to the main bearings. These bearings all failed at once—therefore the oil must have been cut off from them all at once. Under normal conditions, some of the bearings would still be good when the first one failed.

Altitude would not affect propane operation any differently than it would gasoline operation.

If you find that you need to raise the compression, we would suggest that you secure a set of high altitude pistons for the engine, as this will be more satisfactory in the long run than milling or grinding down the head. If the engine now has sufficient power for your purposes, you will naturally balance the cost of installing the pistons against the expected saving in fuel consumption; if reduction in fuel cost is the only reason for raising the compression, the logical time to do it is when the engine is open for some other reason, such as a major overhaul.

A cold manifold will give you considerable benefit, and it is not very expensive to install. The Ellis Manifold Co., Los Angeles, can supply this through a distributor in your area.—Editor.

Engine Conversions Televised To Stimulate Dealer Volume

In an effort to direct the attention of the public to the advantages of butane-propane as an automotive fuel, the Manchester Welding and Fabricating Co., Lynwood, Calif., manufacturer of propane tanks, has been using spot announcements on a southern California television station for the last four months. The advertising is a part of the Sunday morning "Inspirational Hour," on KLAC, Channel 13, at 8:15.

Pictures of various automotive and tractor installations appear on the screen, while the announcer reads the copy. Manchester Welding does not sell direct to the consumer, so the announcement tells a sales story on the use of LP-Gas as fuel, and asks

Completely installed jobs like this John Deere tractor equipped with Manchester 31-gal. tank are shown on the TV program.

Richfield truck station at Fresno, Calif., that will cater to butane-powered trucks. This is similar to the Redding, Calif., Richfield station which has served as a pattern for a chain of such stations in California.

the listener to investigate the simplicity of conversions.

The closing sentence invites those interested to call the nearest dealer for further details regarding the many savings possible in using propane as a motor fuel. The list of the company's dealers in the territory covered by the broadcast closes the scene.

Some of the dealers report many inquiries have been received as the result of the TV broadcasts. Ben Brunner, sales manager of Manchester Welding and Fabricating Co., considers the results have been quite satisfactory, and states that the company plans to continue the program indefinitely as a service to their dealers and the industry.

Dallas Firm Will Make 16 Sizes of Motor Fuel Tanks

Production has been started by the Master Tank and Welding Co., Dallas, Texas, on a line of 16 motor fuel tanks. These will be standard stock items and will range in size from 15" in diameter by 31" long with a 20-gal. capacity on through a tank 24 in. in diameter by 60 in. long with a 103-gal. capacity.

The fittings, consisting of a line valve, vapor return, liquid line, filler valve and relief are set on a 45° angle and protected by a rugged cover. It has a visible J. Y. Taylor float gauge. In addition to these stock items, Master Tank & Welding will continue to build special sizes on request.

Canadian Firm Marketing French Carburetion Unit

Charles Le Borgne, Ltd., Montreal, Canada, is agent in North America of the French "D.G.D.—AMUG" carburetion system which has been in use in France for a number of years. The unit was originally developed during World War II when propane gas was used as a substitute fuel for the then scarce gasoline.

The D.G.D. system, consisting of a regulator and a carburetor and all necessary accessories, has been used on many vehicles in Canada.

Charles Le Borgne, Ltd., is located at 1487 Mountain St., Montreal, Quebec, Canada.

The Trade

The **Ellis Transport Corp.**, Houston, Texas, has announced the discontinuation of its wholesale appliance business (Ellis Butane Equipment Co.) in order to devote its entire time and resources to the development of its fuel business; namely, the transport company and **L.P.G. Carburetion, Inc.**

Larger quarters and expanded facilities will be available to the company about Dec. 1.

Alan B. Cameron has been named president of the **Ruud Manufacturing Co.**, Pittsburgh, Pa. He succeeds Richard H. Lewis, who becomes chairman of the executive committee.

K. M. Clark, formerly vice president and treasurer, now becomes executive vice president, and Halvard Lintvedt, who has been manager of the firm's Kalamazoo, Mich., plant was elected vice president.

Weldit, Inc., Detroit, has appointed Clifford L. Schueltz & Co., Chicago, as distributors of Weldit equipment and Tipaloy electrodes for the Chicago area, according to O. L. Smith, Weldit president.

Weldit recently became national distributors for Tipaloy, Inc., manufacturers of resistance welding electrodes.

"For furnishing technical assistance to the peoples of the Marshall Plan countries," the Robertshaw Thermostat Division of **Robertshaw-Fulton Controls Co.** was awarded a certificate of cooperation by the Eco-

Additional space was recently provided the engineering building of Robertshaw Thermostat Div. by means of adding a second floor and a wing. This is only part of the construction program at the Youngwood, Pa., plant.

nomic Cooperation Administration recently.

Special recognition was given the company by the ECA for having received individual groups from western European countries on technical assistance missions.

Robertshaw Thermostat has recently completed a building program at its Youngwood, Pa., headquarters consisting of a second-floor addition and a wing in the engineering building, a new building for the manufacture of fuse boosters, a thermostat repair building, and an extension to the "Unitrol" building.

WM. E. BAMBRICK

William E. Bambrick has been appointed divisional sales manager of **Caloric Stove Corp.** for Arkansas, Oklahoma, Mississippi, and Louisiana, according to Julius Klein, company president.

Mr. Bambrick will headquarter in Baton Rouge, La.

District representatives in the division are Oscar E. Swanson, Arkansas; E. G. Wall, Oklahoma; and P. O. English, Mississippi.

In a bulletin to the LPG industry, **The Bastian-Blessing Co.** has called attention to the fact that, because of the present shortage of controlled materials, it is required to operate under a "closed" CMP.

Under a "closed" CMP, the company can buy controlled materials (steel, brass, copper and aluminum in mill shapes and forms) only within the quantities allocated the company by NPA, the quantity of the alloca-

tions depending greatly on the percentage of the various DO ratings received from its customers.

The bulletin states that it is vitally important to Bastian-Blessing customers to cooperate by using available DO ratings wherever possible on every order sent in. This will enable the company to obtain the necessary materials with which to fill the orders.

W. N. PEACOCK, JR.

W. N. Peacock, Jr., has been appointed chief engineer of **Trinity Steel Co.**, Dallas, according to C. J. Bender, president of the LP-Gas tank and transport manufacturing firm.

Mr. Peacock has been active in the industrial engineering field for a number of years, having spent eight years on the staff of Wyatt Metal and Boiler Works after attending Southern Methodist University.

Howe Scale Co., Rutland, Vt., has moved its Chicago branch to 1915 N. Harlem Ave., expanding the company's office and service facilities in that area. Curtis B. Hoffman is manager of the office.

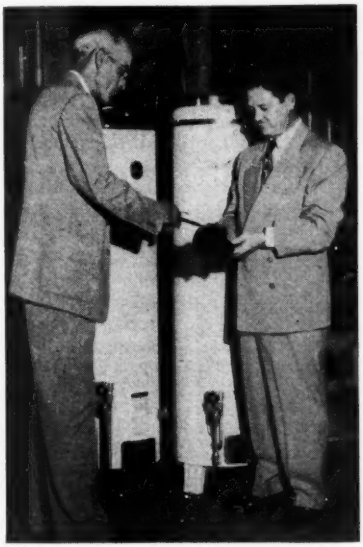
Richard F. Straw, vice president in charge of sales, has announced the following appointments:

Lierd E. Grant as manager of the Los Angeles branch, supervises sales and service activities of Howe scales and hand trucks in southern California, Arizona, western New Mexico, and the El Paso region of Texas.

O. B. Collins, as manager of the Atlanta branch, covers Georgia, South Carolina, Florida, Alabama,

and southeastern portion of Tennessee.

Jack H. Brewer, as manager of the Minneapolis branch, supervises activities in Minnesota, northwestern Wisconsin, northwestern Iowa, North and South Dakota, and western Montana.



Dearborn Stove Co. executives R. H. Norris, left, executive vice president, and C. H. Hinds, right, director of sales, are inspecting the new Dearborn automatic gas water heaters, the most recent addition to the Dearborn line of gas-fired home appliances. The Dearborn water heater line includes four basic models, with 20, 30, 40, and 50-gal. water storage tank sizes. The company also manufactures gas space heaters and conversion burners.

The **National Ideal Co.**, manufacturer of the Premier line of poultry, hatchery and general farm equip-

ment for use with LP-Gas, recently moved into a new, modern office building in Toledo, Ohio.

The company selected a site after a survey revealed that practically the entire staff lived in surrounding neighborhoods, eliminating many transportation problems. The office building is one hour away from the company's Hicksville, Ohio, factory.

President W. K. Krapp, Lewis Frautschi, vice president, and other company executives cooperated with the architect in setting out features in the two-story brick building which would specially suit their manufacturing problems.

J. H. RASMUSSEN

J. H. Rasmussen has been named vice president in charge of sales of all **Perfection Stove Co.** cooking and heating appliances. Mr. Rasmussen has had many years' experience in the appliance field. He will make his headquarters in Cleveland, Ohio.

C. H. Foulds will continue as vice president in charge of contract and automotive sales for Perfection.

Ralph S. Cadwallader, who has served Perfection for the past few years in the states of Wyoming, Colorado, New Mexico, Nebraska, Kansas, Oklahoma, northern Texas, and Missouri, has been named sales promotion manager of the company, according to A. B. McLaren, division sales manager.

Robert E. Maloney, president of **Calor Gas Co.**, San Francisco, has announced the formation of a Rocky

ROBT. E. MALONEY

R. A. HEMINGSON

Mountain division to cover the company's expansion in marketing butane and propane to distributors throughout the Rocky Mountain area.

Ray A. Hemingson has been appointed manager of the new division, with headquarters in the First National Bank Bldg., Great Falls, Mont. He was formerly located in Calor's San Francisco office. Before coming to Calor, Mr. Hemingson had been with Phillips Petroleum Co. and H. Emerson Thomas & Associates.

Frank S. Reid has been named regional appliance service manager for **Servel, Inc.**, in the northern section of the company's West Coast region, according to John K. Knighton, vice president in charge of sales.

Mr. Reid will headquarter in Portland, Ore., and will supervise appliance service operations in Washington, Oregon, Idaho, Montana, Utah, northern California, and northern Utah.

Blair Hughes will continue as Servel's regional appliance service manager for Arizona, southern Nevada, and southern California, with headquarters in Los Angeles.

The company has also announced the appointment of Townsend Cooper as director of creative planning and production in the sales promotion department.

Servel is celebrating its 25th an-

niversary in 1951. On October 15 the company held a cocktail party at the AGA Convention in St. Louis commemorating its silver anniversary.

Robert M. Stevens was named advertising manager of Servel on Oct. 9. He has been with the company for six years, first as a regional advertising and sales promotion representative and later as assistant advertising manager.

Servel, Inc., is currently offering to replace at the wholesale price every obsolete or neglected air or water-cooled gas refrigerator in the New York area that has been in operation 15 years or more.

This is the result of a situation that developed in New York (and probably is peculiar to that city alone) due to the refusal of the local utility to live up to its traditional responsibility of servicing gas appliances, which resulted in hazards to users of improperly operating units.

A. J. KERR

A. J. Kerr, vice president of meter and valve sales for **Rockwell Manufacturing Co.**, has been appointed chief of the valves and fittings branch, general components division of the National Production Authority. Mr. Kerr will headquarter in Washington, D.C.

Rockwell has announced the appointment of Hans A. Altorfer as chief engineer of the Nordstrom Valve Division, according to F. V. Snodgrass, general manager of the Oakland, Calif., division.

H. O. Vaars is a new sales engineer for Rockwell in Wisconsin and

upper Michigan. He will service water and gas utilities and LP-Gas accounts in this territory.

Named as assistant sales manager of oil field products is R. J. Munn, according to Rockwell Vice President L. A. Dixon. He will assist H. Gottwald, general sales manager of Nordstrom valves.

The Estate Stove Co., Hamilton, Ohio, has announced the appointment of W. H. Elkins as a district representative in the Texas territory, according to Gordon Hentz, Estate's general sales manager.

Mr. Elkins, a resident of Dallas, has had wide experience in the distribution of major appliances in the Texas area. For the past three years he was district manager of Lone Star wholesalers, of Dallas.

Mr. Elkins activities will be under the supervision of J. Edward Wyatt, Jr., Estate's regional sales manager for the Texas area.

Paul F. Armbruster is new Midwest division sales manager of the Estate Stove Co., with headquarters in Omaha. He replaces C. M. Christensen who was recently transferred to the post of Western division manager.

Formerly, Mr. Armbruster was dealer-manager with Mid-America Appliance Corp. and sales-service representative for Servel, Inc.

Earl B. Cutter has been named assistant to the vice president in charge of sales for the **American Meter Co.** Prior to his recent appointment, Mr. Cutter has been active in sales of American Meter products in the Midwest.

Lewis M. White, formerly manager of **American Stove Co.'s** customer accounting department, was appointed

manager of the firm's newly created parts division, Oct. 1, according to George P. Eichelsbach, Jr., vice president in charge of manufacturing.

George W. Rogers simultaneously was named manager of the customer accounting department by Clark P. Fiske, secretary-treasurer.

General Controls Co., Glendale, Calif., has appointed managers for the company's recently opened branch offices in New Orleans and Omaha.

Robert C. Servat is manager in New Orleans with headquarters at 426 Audubon Bldg.

Eldon Burnett, in charge of the Omaha office, has been associated with General Controls for three years, having served as a sales engineer prior to his present appointment.

S. T. Longoria has joined the sales staff of **Brower Manufacturing Co.**, Quincy, Ill., according to Sales Manager T. F. Thompson.

Mr. Longoria, a graduate of the University of Texas, was formerly a district manager of the Moorman Manufacturing Co.

STATEMENT OF THE OWNERSHIP, MANAGEMENT, AND CIRCULATION REQUIRED BY THE ACT OF CONGRESS OF AUGUST 24, 1912, AS AMENDED BY THE ACTS OF MARCH 3, 1933, AND JULY 2, 1946 (Title 39, United States Code, Section 233).

Of BUTANE-PROPANE *News*, published monthly at Los Angeles, California, for October 1, 1951.

1. The names and addresses of the publisher, editor, managing editor, and business managers are: Publisher, Jay Jenkins, 198 South Alvarado Street, Los Angeles, 4, California; Executive Editor, Lynn C. Denny, 198 South Alvarado Street, Los Angeles 4, California; Editor, Carl Abell, 198

South Alvarado Street, Los Angeles 4, California.

2. The owner is: (If owned by a corporation, its name and address must be stated and also immediately thereunder the names and addresses of stockholders owning or holding 1 percent or more of total amount of stock. If not owned by a corporation, the names and addresses of the individual owners must be given. If owned by a partnership or other unincorporated firm, its name and address, as well as that of each individual member, must be given.)

Jenkins Publications, Inc., 198 South Alvarado Street, Los Angeles 4, California. Jay Jenkins, Helene Jenkins, Eloise Jenkins, 198 South Alvarado Street, Los Angeles 4, California.

3. The known bondholders, mortgagees, and other security holders owning or holding 1 percent or more of total amount of bonds, mortgages, or other securities are: (If there are none, so state.) None.

4. Paragraphs 2 and 3 include, in cases where the stockholder or security holder appears upon the books of the company as trustee or in any other fiduciary relation, the name of the person or corporation for whom such trustee is acting; also the statements in the two paragraphs show the affiant's full knowledge and belief as to the circumstances and conditions under which stockholders and security holders who do not appear upon the books of the company as trustees, hold stock and securities in a capacity other than that of a bona fide owner.

5. The average number of copies of each issue of this publication sold or distributed, through the mails or otherwise, to paid subscribers during the 12 months preceding the date shown above was: (This information is required from daily, weekly, semiweekly, and triweekly newspapers only.)

JAY JENKINS, Publisher.

Sworn to and subscribed before me this 28th day of September, 1951.

(Seal) DOROTHY B. NEWLON.

Notary public in and for the County of Los Angeles, State of California.

(My commission expires November 2, 1952.)